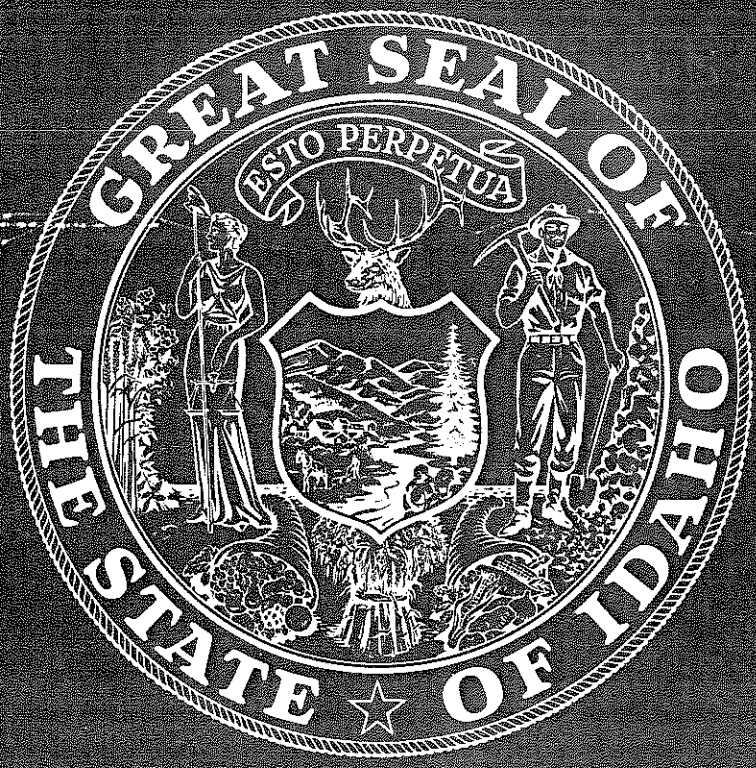
Idaho State Water Plan



Adopted by the

Idaho Water Resource Board

January 19, 1982

STATE OF IDAHO

JOHN V. EVANS
Governor

"There shall be constituted a State Water Resource Agency composed as the Legislature may now or hereafter prescribe which shall have power to formulate and implement a state water plan for optimum development of water resources in the public interest . . ."

— Constitutional Amendment

State of Idaho

THE STATE WATER PLAN

January 1982

A. KENNETH DUNN
DIRECTOR
IDAHO DEPARTMENT OF WATER RESOURCES
STATEHOUSE
BOISE, IDAHO 83720

STATE OF IDAHO

IDAHO WATER RESOURCE BOARD

STATEHOUSE
BOISE, IDAHO 83720

January 19, 1982

To the Citizens of Idaho:

It is our pleasure to present to you The State Water Plan. Valuable time and effort has been expended by many citizens around the state in helping us develop this plan, and we gratefully acknowledge this assistance. We realize that the contents of this document may not meet the desires and expectations of every citizen, but we feel that it represents the best approach for the greatest number of Idahoans.

The success of this plan depends on how actively we all work toward its implementation. The Board looks forward to working closely with individual citizens, the legislature, and local, state and federal government to make these policies a reality.

The State Water Plan will serve Idaho only as long as it continues to reflect the needs of Idaho. The plan is subject to public and formal review at least once every five years, and this document is the result of the first formal review. We urge every citizen to monitor the plan as it is put to practical use and to suggest changes to the Board when necessary.

We seek the assistance and support of the people of Idaho so that together we may work toward providing for the future economic growth and protection of our natural resources that are so important to Idaho.

Sincerely,

M. Reed Hansen

M. REED HANSEN, Chairman
Idaho Water Resource Board

RESOLUTION TO ADOPT

January 19, 1982

The Idaho Water Resource Board is charged with the task of formulating water resource policy, and the State Water Plan has been published and distributed to the public, and public meetings and hearings have been held.

IT IS RESOLVED that the Idaho Water Resource Board hereby adopts the attached document as the State Water Plan to guide the future use and conservation of Idaho's water resources.

M. Reed Hansen, *Chairman*

James Shawver, *Vice-Chairman*

Franklin Jones

Donald R. Kramer, *Secretary*

Gene M. Gray

Richard W. Wagner

Scott W. Reed

Herman F. McDevitt

FOREWORD

The State Water Plan is the result of much thought, study and research by the Idaho Water Resource Board to fulfill the constitutional mandate "to formulate and implement a State Water Plan . . . ."

The State Water Plan is a guide to future water resource management in Idaho and results from a series of documents. In July 1972, the *Interim State Water Plan* was published. It catalogued the resources of the state and presented various alternatives for future water policy to the public. *The State Water Plan - Part One, The Objectives,* was published in June 1974 to guide the direction of later efforts to formulate the water plan. In December 1976, *The State Water Plan - Part Two* was adopted wherein several state water policies were advanced. This document is the result of the first formal review of the objectives and policies presented in parts one and two of the *State Water Plan* as previously adopted. It contains both the objectives and the policies and replaces the earlier two-part approach.

Water policy for the Snake River, Panhandle and Bear River basins is set forth within this document. *The State Water Plan* is a series of goals and recommendations to be used to guide Idaho's future water resource management. Some of these policies may pertain only to a single basin or be applicable to each basin.

Implementation of the *State Water Plan* will require changes in Idaho law and public attitudes. The Idaho Water Resource Board will work closely with the legislature to secure changes in the law where necessary. Public understanding and compromise will be required by all interests to assure the plan's full implementation. Unless the plan is implemented, there may not be sufficient water supplies left in many areas to maintain Idaho's quality of life. The Idaho Water Resource Board has found great support among the citizens of Idaho for a state water plan and is confident that it will be accepted as a process for continuing Idaho's economic growth while protecting a quality environment.

Because public priorities in economic and social conditions change, this plan will be reviewed and updated on a continuing basis, according to statute this review must take place at least once every five years. Future reviews will re-examine the need for water allocations, evaluate groundwater and water quality policies, and address other issues on the basis of opportunities to better use, protect and preserve the state's water resources for generations to come.

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Idaho Water Resource Board

Carl Tappen, Ex-officio member
Leonard E. Graham, Rigby
Evan M. Kackley, Wayan
George L. Crookham, Jr., Caldwell
Arlie L. Parkins, Marsing
LeRoy Stanger, Idaho Falls
Robert M. Bandy, Priest River
Edward Reichert, Filer
Charles J. Marshall, Jerome
Thomas Olmstead, Twin Falls
R. Keith Higginson, Boise, Ex-officio member
Ferris M. Kunz, Montpelier
John F. Streiff, Lewiston
George L. Yost, Emmett
Edwin C. Schlender, Malta
Joseph H. Nettleton, Murphy

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Idaho Water Resource Board

Carl Tappen
Robert R. Lee
Wayne T. Haas
C. Stephen Allred

Former Directors
Idaho Department of Water Resources

R. Keith Higginson
C. Stephen Allred

ACKNOWLEDGEMENTS

Formulation of *the State Water Plan* as adopted involved a great number of Idahoans from all walks of life. Citizen input was received through public opinion surveys, at information meetings, and public hearings. The contributions of the private sector as well as state, federal, and local agencies assured that a broad view of public interest will be considered in future water resource decisions. Without this citizen and agency response, a State Water Plan would not be possible.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

THE WATER PLANNING PROGRAM

The Idaho State Water Plan was adopted by the Water Resource Board to guide the development, management, and use of the state's water and related lands. The plan recognizes past actions, addresses present conflicts and opportunities, and seeks to ensure that future water resource uses will complement and supplement state goals directed toward achieving a "quality of life" for the citizens of Idaho. The plan is a dynamic document, subject to change to reflect citizen desires and to be responsive to new opportunities and needs. According to statute, a formal review of this plan must take place at least every five years.

Constitutional Authority

The authority for the preparation of a State Water Plan is Article XV, Section 7 of the Idaho Constitution. This constitutional amendment was adopted in November 1964 following a state-wide referendum and provides that:

> There shall be constituted a Water Resource Agency, composed as the Legislature may now or hereafter prescribe, which shall have power to formulate and implement a state water plan for optimum development of water resources in the public interest; to construct and operate water projects; to issue bonds, without state obligation, to be repaid from revenues of projects; to generate and wholesale hydroelectric power at the site of production; to appropriate public waters as trustee for Agency projects; to acquire, transfer and encumber title to real property for water projects and to have control and administrative authority over state land required for water projects; all under such laws as may be prescribed by the Legislature.

Section 7 provides the basic guidance and authority to formulate a State Water Plan. Previous to the adoption of Section 7, Section 3 of the Idaho Constitution provided for the appropriation and allocation of water during low water conditions. Although no legal confrontations have been encountered, Section 7 probably tempers Section 3 in that future decisions must be in conformance with the State Water Plan. Section 3 provides that:

> The right to divert and appropriate the unappropriated waters of any natural stream to beneficial uses, shall never be denied, except that the state may regulate and limit the use thereof for power purposes. Priority of appropriation shall give the better right as between those using the water; but when the waters of any natural stream are not sufficient for the service of all those desiring the use of the same, those using the water for domestic purposes shall (subject to such limitations as may be prescribed by law) have the preference over those claiming for any other purpose; and those using the water for agricultural purposes shall have preference over those using the same for manufacturing purposes. And in any organized mining district those using the water for mining purposes or milling purposes connected with mining have preference over those using the same for manufacturing or agriculture purposes. But the usage by such subsequent appropriators shall be subject to such provisions of law regulating the taking of private property for public and private use, as referred to in section 14 of article I of this Constitution.

Legislative Authority

Article 15, Section 7 of the Idaho Constitution called for the creation of a "Water Resource Agency" but did not establish the agency. This was done in 1965 by the 38th Legislature which established the Water Resource Board with the powers and duties:

> To progressively formulate an integrated, coordinated program for conservation, development, and use of all unappropriated water resources of this state, based upon studies and after public hearings in affected areas at which all interested parties shall be given the opportunity to appear. (Idaho Code 42-1734, [b])

To assist the Water Resource Board in the preparation of the State Water Plan, the legislature provided for the director of the Department of Water Resources:

> To perform administrative duties and such other functions as the Board may from time to time assign to the Director to enable the Board to carry out its powers and duties. (Idaho Code 42-1805, [6])

Formulation of the State Water Plan

Formulation of a State Water Plan is a dynamic process. Adoption of The State Water Plan - Part One, The Objectives in 1974 and The State Water Plan - Part Two in 1976 provided an initial water policy. Implementing the policies in Part Two required the combined efforts of government agencies, the legislature, private concerns and the public. Consequently, the report delineated those areas where legislative action was required, identifed the programs to be pursued by the Board and described the areas where cooperation of public and private interests was necessary. The State Water Plan has evolved into a continuing planning process directed toward the development, adoption and implementation of various policies, projects, and programs which develop, utilize, conserve, and protect the state's water supplies.

The basic steps followed in this planning process are:

1. A comprehensive public involvement program to determine public views and desires regarding resource problems, needs, and potentials;
2. An ongoing evaluation of the water and land resource base and an estimation of the probable future conditions without a proposed policy;
3. A determination of public views about conceptual environmental quality (E.Q.) and economic development (E.D.) plan alternatives;
4. An evaluation of the effects of environmental quality and economic development programs and projects;
5. The preparation of alternative policies and proposed plans, including identification of beneficial and adverse effects;
6. Final adjustment of the policies based on public response and action taken by the Water Resource Board;
7. The adoption of the State Water Plan by the Idaho Water Resource Board as required by Article 15, Section 7, of the Idaho Constitution.

This state water planning process includes an extensive public involvement program and the information received is used in formulating the State Water Plan. Information meetings and public hearings are held to answer questions the public might have concerning the planning process and the various policies, and to solicit input and comments.

IDAHO'S WATER RESOURCES

There are five major systems in Idaho. They are the Snake, Bear, Spokane, Clark Fork-Pend Oreille, and Kootenai rivers. In this summary, the Spokane, Kootenai, and Clark Fork-Pend Oreille rivers are grouped under the heading Panhandle basins.

Snake River Basin

The Snake River is the largest river system in Idaho with a drainage area of approximately 87 percent of the state. The Snake River headwaters are in Wyoming on the western slope of the Continental Divide. Crossing Idaho's eastern border, it flows northwestward 59 miles through a canyon to Heise where it opens onto the Snake River Plain. From Heise to Milner, a distance of 219 river miles, the river is not deeply entrenched. It is in this reach that numerous diversions for irrigation are made.

At Milner, the river enters a deep canyon cut through lava and sedimentary beds and continues for 216 miles in a west and northwesterly direction. Near the Oregon border, the river emerges from the canyon and flows through a broad valley to Weiser, a distance of about 75 miles. Downstream from Weiser the river enters Hells Canyon and flows a distance of about 190 miles to Lewiston. It leaves Idaho at Lewiston, turning westward for 139 miles to its junction with the Columbia River near Pasco, Washington.

The largest tributaries of the Snake are the Salmon and the Clearwater rivers. Other important tributaries are the Henrys Fork, Wood, Boise, and Payette rivers. Basin areas outside of Idaho which contribute substantially to the river's flow include the upper basin in Wyoming, the Owyhee, Malheur, Burnt, Powder, and Imnaha rivers in Oregon and the Grande Ronde River in Washington. Small portions of the Snake River basin also lie in Utah and Nevada. Most of the streamflows of the Snake River basin are derived from snowmelt in the mountainous areas. The average runoff in the Snake River below the Clearwater River where it leaves Idaho is about 36 million acre-feet per year. Approximately one-third of the flow leaving Idaho is derived from the basin above Weiser. Another third comes from the Clearwater River basin. The Salmon River produces about one-fourth, with the remaining amount of approximately 10 percent coming from tributaries in Oregon and Washington and small streams in Idaho below Weiser. Average annual runoff under present conditions at principal gaging stations in the Snake River basin is shown in Table 1. Location of these gages is shown on Figure 1. Losses from river flow between pairs of gages (Snake River, Neeley to Milner, and the Boise and Payette River gages) are due to major

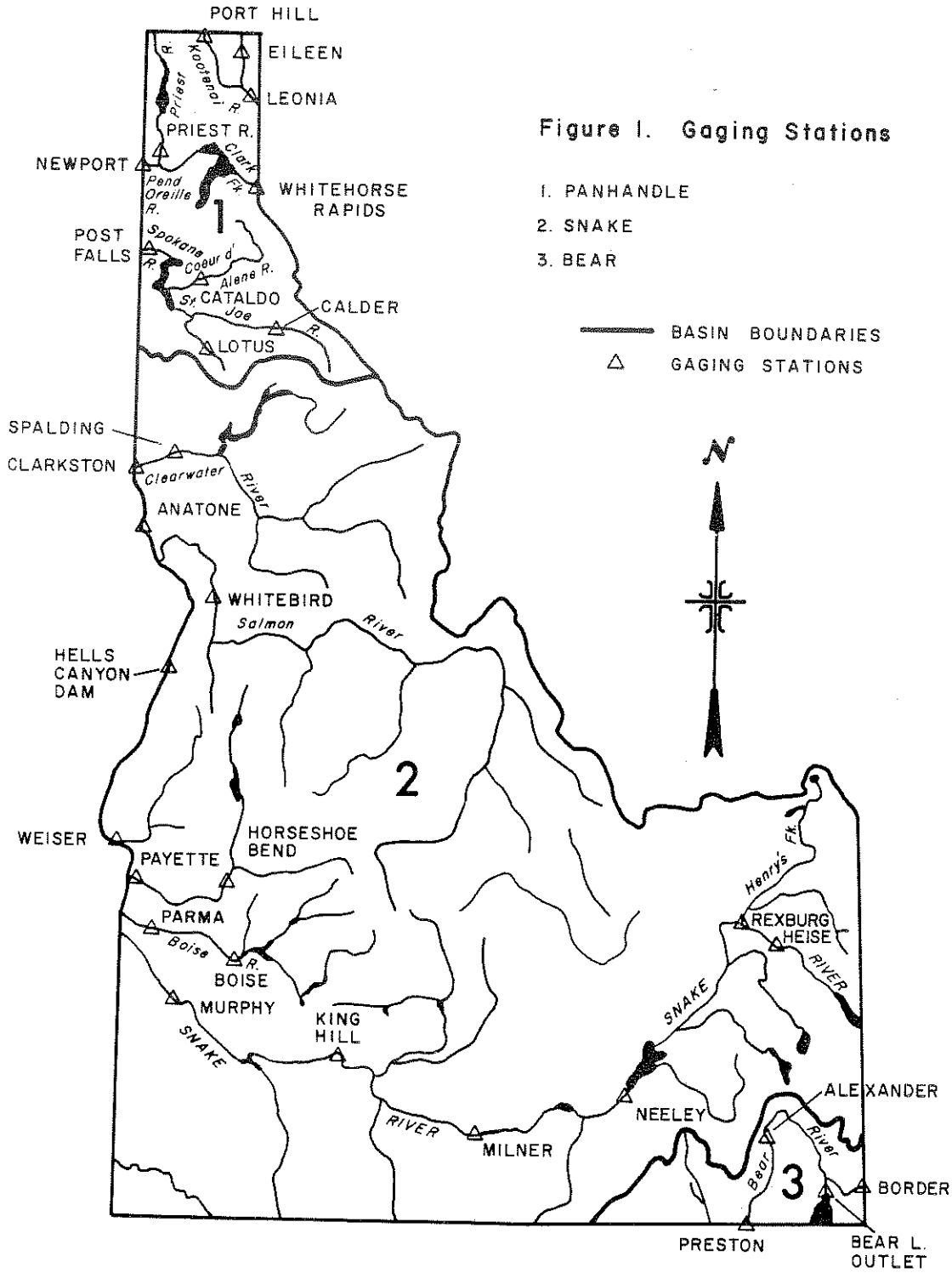

Figure I. Gaging Stations

1. PANHANDLE
2. SNAKE
3. BEAR

BASIN BOUNDARIES

GAGING STATIONS

irrigation diversions. The dramatic gain in Snake River flow between Milner and King Hill is largely the result of discharge from the Snake Plain aquifer in the Thousand Springs area. Average seasonal variations in Snake River flow are illustrated by Figure 2. The flows at Heise as indicated in Figure 2 result from natural snowmelt modified by reservoir storage operations for summertime irrigation. At King Hill, the seasonal hydrograph is principally affected by the near constant discharge of groundwater from the Snake Plain aquifer. It is also affected by the flows which pass Milner Dam in high runoff years. Flows at Weiser reflect the effects of the storage, diversion, and groundwater management in virtually all the irrigated areas of the Snake River basin. At Clarkston, the hydrograph is dominated by runoff from the vast unregulated areas of the Salmon and Clearwater basins.

Table 1. Average Annual Runoff of Major Rivers in the Snake River Basin at Selected Gages (1928-77 Base Period), Adjusted to 1977 Levels of Development.

Gage	Runoff (acre-feet)
Snake River near Heise	4,918,000
Henrys Fork near Rexburg	1,400,000
Snake River at Neeley	4,067,000
Snake River at Milner	1,605,000
Snake River at King Hill	7,270,000
Snake River near Murphy	7,430,000
Boise River near Boise	1,981,000
Boise River near Parka	1,020,000
Payette River near Horseshoe Bend	2,325,000
Payette River near Payette	2,049,000
Snake River at Weiser	12,159,000
Snake River at Hells Canyon Dam	13,233,000
Salmon River at Whitebird	8,158,000
Snake River near Anatone	24,535,000
Clearwater River at Spalding	11,252,000
Snake River near Clarkston	35,905,000

The Snake River basin is subject to wetter-than-normal and drier-than-normal periods of runoff. High and low runoff years in the Snake River basin are illustrated in Figure 3. The hydrographs illustrate the general sequence of wet and dry periods in the eastern portion of the basin at Heise, in the southwestern portion at Twin Springs in the Boise River system, and in the northern portion of the basin at Whitebird on the Salmon River. These locations were chosen because of their relatively long period of available records. In each hydrograph the sequence of years of lowest runoff generally occurred between 1929 and 1942. This sequence was the most severe water-short period in the basin during the twentieth century. Using the record of the Columbia River at The Dalles, Oregon, the longest record of streamflow data in the Columbia basin, it appears probable that the period in the 1930's was the driest in the past 100 years.

A period of above normal runoff began in 1965 and continued through water-year 1976, although 1968 and 1973 were drier than normal. Runoff in 1977 was the lowest of record at most gages in the basin and 1979 was substantially below normal.

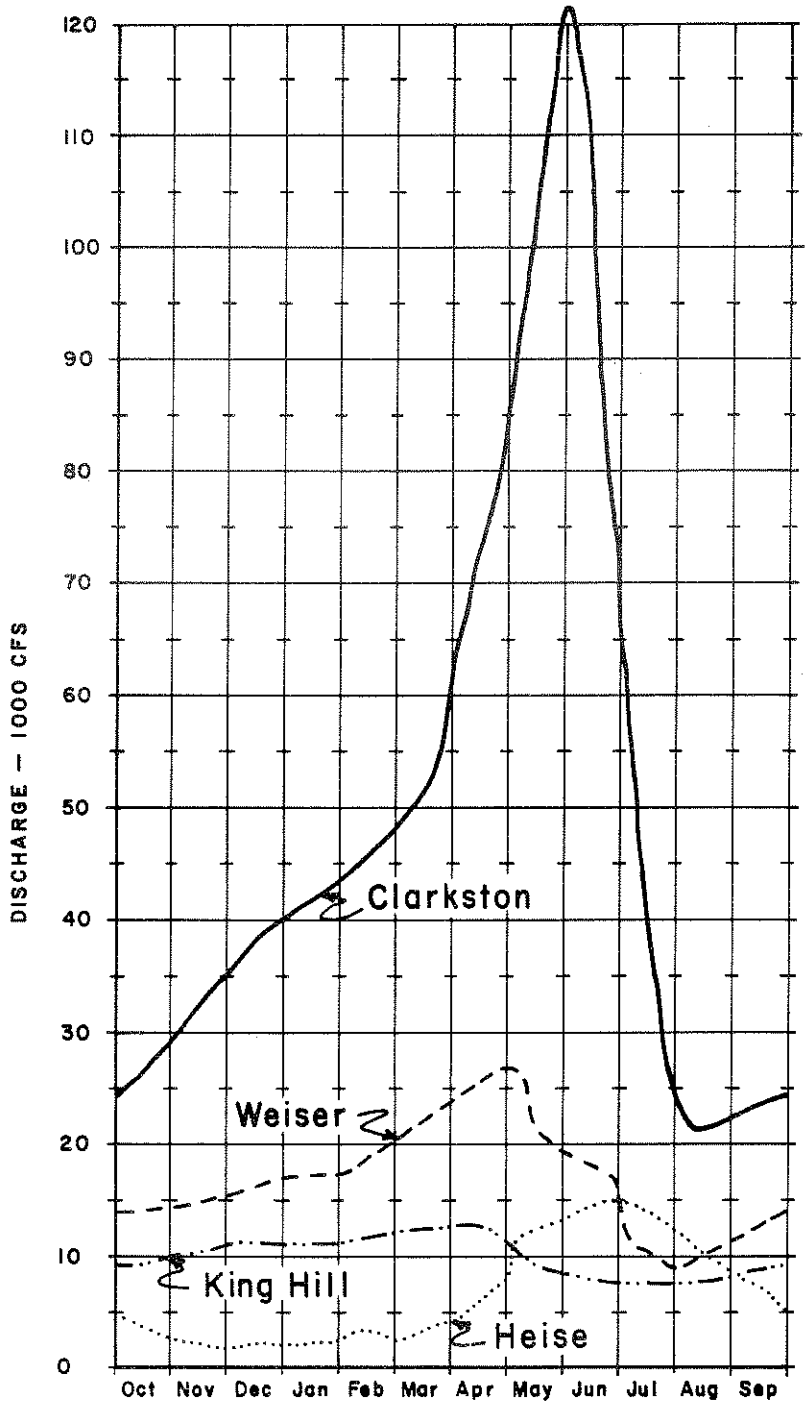

Figure 2. Average monthly flows of the Snake River at four gaging stations adjusted to 1977 levels of development.

The longest streamflow records available in the basin are similar to those shown in Figure 3 and have data generally for less than 60 years. During this period, major changes have occurred in water use and control. Irrigated agriculture has increased by some 3 million acres. Nearly all of the major irrigation, power, and flood control reservoirs have been constructed during this period. Groundwater recharge and discharge from the Snake Plain aquifer has been significantly changed, thereby modifying the flow pattern of the river. Because of these changes, historic records in themselves are often not useful to describe the water supply of a river because they do not reflect current conditions. For that reason, hydrologic data reported in this and following sections of the report generally refer the to base period of 1928 to 1977 adjusted to 1977 levels of development.

The Snake River is intensively managed. Controls on the flow are imposed by a system of reservoirs and diversions. The reservoirs were constructed for one or more purposes, but irrigation use is involved in most of the Snake River system reservoirs.

Records of diversions are available for only a fraction of the irrigation, canals, and other uses of the Snake River basin. Groundwater withdrawal and consumption generally is not measured. Because of this, total water use can only be estimated by indirect methods.

The 4.5 million acres of irrigated land in the Snake River basin deplete the river flow by nearly 7 million acre-feet per year. Twenty-five percent of this is withdrawn as groundwater. Irrigation diversions have their primary effect on the river during the summer months.

The 1976 State Water Plan set minimum flows near Murphy (3300 cfs) and at Weiser (4750 cfs). Since the 1950's, there has been a general downward trend in the annual low flow of the Snake River near Murphy. This is illustrated by Figure 4. Causes of the declining flow include the very large pumped diversions from the river between Hagerman and the Murphy gage, diminishing discharge from Thousand Springs which results from increased use of groundwater on the Snake River plain, and the occurrence of drier than normal conditions in the Wood River and Bruneau River basins. If development trends continue, it appears likely that diversion management will soon be required to protect the established minimum flow.

At Weiser, the newly designated minimum flow was violated for two days in 1977 as a result of large diversions from the Snake River and very low outflows from the Boise and Payette basins. Minimum annual flows at Weiser do not exhibit a downward trend like those near Murphy because the outflows from the Boise and Payette Rivers are usually quite large when Snake River diversions are near their maximums. However, the 1977 event demonstrated the potential for these events to occur at the same time in severely dry years, and with continuing increases in Snake River diversions, the resulting low flow may be significantly less next time.

Bear River Basin

The Idaho portion of the Bear River basin is situated in the southeast corner of the state. Elevations range from 4400 feet in the valley to over 9000 feet. About one-half of the area is mountainous and lies above 6000 feet.

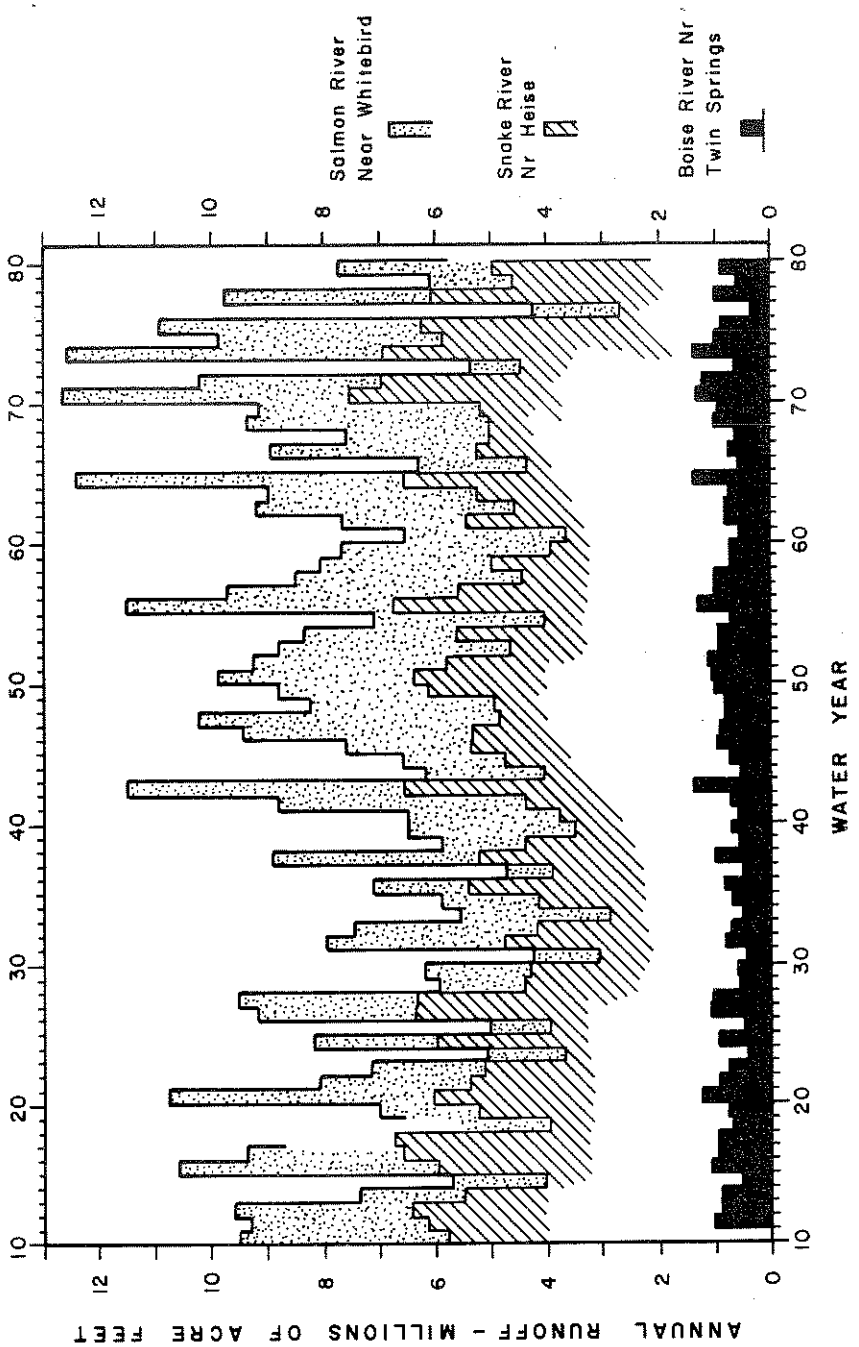

Figure 3. Annual runoff at selected sites in the Snake River Basin.

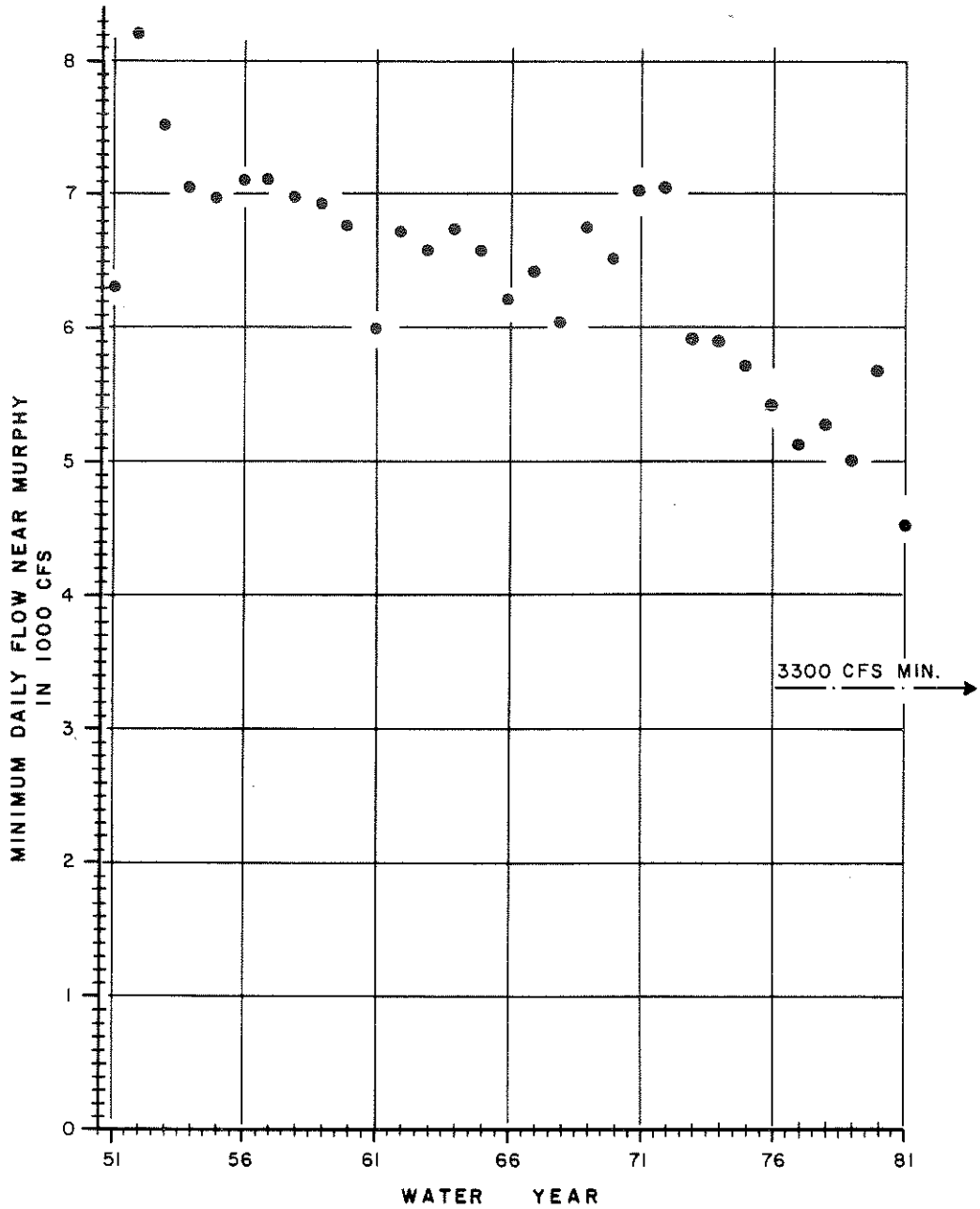

Figure 4. Annual minimum daily flow of Snake River near Murphy.

The major valleys and mountain ranges trend north-south. Tributary valleys intersect at right angles. Tributary stream gradients are steep, whereas main valley gradients are comparatively gentle.

The entire Bear River basin drainage comprises 7474 square miles and includes portions of three states: Utah (3255 square miles), Idaho (2704 square miles), and Wyoming (1515 square miles). Although the State Water Plan covers only that portion of the Bear River basin situated in Idaho, it is necessary to understand important characteristics of other parts of the basin.

The Bear River begins on the northern flank of the Uinta Mountains in Utah. Confined generally to a mountain valley, it flows northerly into Wyoming. Near the community of Evanston, the river flows again into Utah, returns to Wyoming, and then flows into Idaho. In Idaho, the Bear River is diverted into Mud Lake and Bear Lake. From Bear Lake, the river flows northwesterly toward the community of Soda Springs, where it turns southerly toward the Great Salt Lake. In Franklin county, Idaho, below the Oneida Narrows, the river meanders broadly in the ancestral Lake Bonneville bottom lands before leaving Idaho. After a circuitous journey of 440 miles and five crossings of state lines, the Bear River terminates in the Great Salt Lake.

Bear Lake is the most striking physical feature in the basin. The blue-green waters of this large, deep lake extend about equally into Idaho and Utah. Once isolated from all but flood flows of the Bear River, the lake has been reunited to the river by a canal.

As with other major streams in Idaho, most of the streamflow in the Bear River is the result of snowmelt in the higher elevation portions of the watershed. Only a portion of the flow is derived from lands in Idaho. The river enters Idaho near the community of Border, Wyoming where it has drained an area of 2500 square miles and has an average annual (1927-1972) flow of 278,000 acre-feet. Bear Lake, the largest lake in the basin and an important offstream storage site, receives water from the Bear River via two canals diverting at Stewart Dam near Dingle, Idaho. The capacity of these canals is large enough that even high flow can be diverted. Water from these canals first enters Mud Lake, then Bear Lake. Water levels in Bear Lake are controlled by a dike between Mud and Bear lakes. Release of the top three feet of Bear Lake water (elevation 5,923.65 to 5,920.65) is made by gravity. The Lifton pumping plant is used to draw Bear Lake below the outlet level (from elevation 5,920.65 to 5,902.00).

Present usable capacity of the lake is 1,421,000 acre-feet. Bear Lake is operated by Utah Power and Light Company to generate power and maintain an assured water supply to meet irrigation water commitments to Utah-Idaho Sugar Company in Utah. Also, the lake is, in effect, operated for flood control, as fall and winter releases are made to insure flood space for snowmelt runoff.

Below Stewart Dam the Bear River flows through a series of power generation facilities owned by Utah Power and Light Company. Average annual runoff at principal gaging stations in the Bear River basin is shown in Table 2. Location of these gages is shown on Figure 1.

Table 2. Average Annual Runoff of the Bear River (1927-1972 base period).

Gage	Runoff (acre-feet)
Bear River near Border	278,400
Bear Lake Outflow	260,000
Bear River at Alexander	463,800
Bear River near Preston	474,900

Major Idaho tributaries of the Bear River are the Thomas Fork, Cub River and the Malad River. Although the Bear River gains flow at successive downstream locations, irrigation diversions make these gains much smaller than if there were no irrigation.

Monthly flows at the various gaging stations are influenced to varying degrees by reservoir regulation, irrigation diversions and return flows. The Bear River at Border is somewhat regulated by upstream storage, and is depleted by irrigation diversions in Wyoming and Utah. The Thomas Fork and the Malad River exhibit monthly flows typical of unregulated streams. Peak runoff occurs during the snowmelt season and then declines throughout the summer months. Bear Lake regulation allows snowmelt season runoff to be stored for use during periods of peak irrigation and power demand. The peak monthly lake outflow occurs during July, with August averaging only slightly less. The monthly regime of flows in the reach below Preston shows the effects of unregulated tributary inflow and substantial irrigation diversions. This results in high flows in May and June and very low flows in July, August and September.

The Bear River system, like other river basins, is subject to variation in runoff due to seasonal and annual precipitation. Dry periods can reduce water available for irrigation on headwater streams with little or no storage. Long periods of low precipitation can deplete storage in Bear Lake.

Annual runoff for two locations on the Bear River under present conditions is shown in Figure 5. The period 1931 through 1945 represents one of below average streamflow. Runoff during the period 1966-76 was generally above normal but 1977 was extremely dry. Variable conditions occurred in the following two years, but these were generally also below normal. In 1980, streamflows again exceeded the long term average.

Panhandle Basins

Streamflow in much of the Panhandle is largely the result of runoff conditions in upstream Montana and British Columbia. The Kootenai River derives most of its flow from both these areas, whereas the Clark Fork drains a large portion of western Montana. The third major Panhandle river, the Spokane, originates entirely within Idaho. Average annual runoff at principal gaging stations is shown in Table 3. The gage locations are shown on Figure 1.

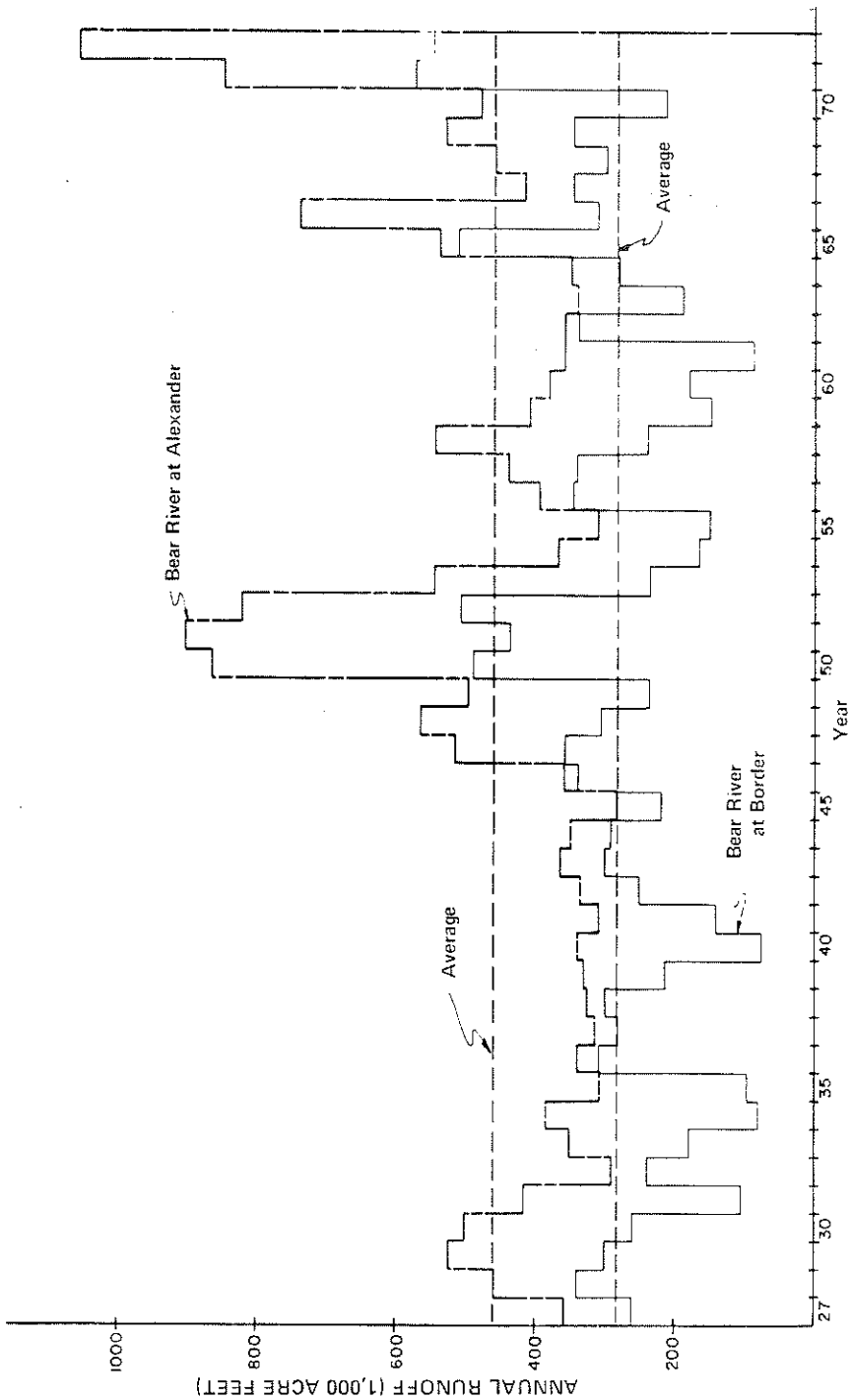

Figure 5. Annual runoff at two stations assuming present level of development. (1927-72 base period)

The Kootenai enters Idaho from Montana at Leonia and discharges about 11.5 million acre-feet per year (15,900 cfs) into British Columbia at Port Hill. It gains an average of about 2000 cfs in Idaho, including approximately 700 cfs from the Canadian portion of the Moyie River. The average flow of the Moyie near its mouth is about 900 cfs.

The Clark Fork, largest of the Panhandle rivers, enters Idaho at Cabinet Gorge and leaves the state at Newport, Washington, where it is called the Pend Oreille River. Average annual runoff at Newport is 18.8 million acre-feet per year (26,000 cfs). The average gain in Idaho is about 3600 cfs. Principal Idaho tributaries are the Pack River and Priest River. The Clark Fork flows through Idaho's largest lake, Lake Pend Oreille. Lake levels have been controlled by Albeni Falls Dam near Newport since 1952.

The average annual flow of the Spokane River at Post Falls is about 4.5 million acre-feet (6300 cfs). Two tributaries, the Coeur d'Alene and the St. Joe, join at Lake Coeur d'Alene to form the Spokane River.

Table 3. Average Annual Runoff of Major Rivers in the Panhandle Basins.

Gage	Runoff (acre-feet)
Kootenai at Leonia	10,080,000
Moyie at Eileen	641,000
Kootenai at Porthill	11,520,000
Clark Fork at Whitehorse Rapids	16,190,000
Priest at Priest River	1,200,000
Pend Oreille at Newport	18,790,000
Coeur d' Alene at Cataldo	1,850,000
St. Joe at Calder	1,713,000
St. Maries at Lotus	375,000
Spokane at Post Falls	4,538,000

Rivers in the Panhandle are managed for power and flood control purposes. There are no reservoirs on the Kootenai River in Idaho, but the recently completed Libby Project in Montana effectively controls flows through Idaho. Regulation at Libby will result in control of all but about one percent of the future floods originating from the Kootenai River. The regime of the river flow is also considerably modified through the year. While flood flows are reduced to the channel capacity, there will be a longer period of higher flows as power and flood control releases are made from late summer through the winter.

The Clark Fork is regulated by Hungry Horse Reservoir, Flathead Lake, and numerous small reservoirs in Montana. Seasonal regulation by those reservoirs results in greater fall and winter flows entering Idaho than would otherwise be the case. Daily fluctuations are also imposed on the river by power operations at the Noxon Rapids and Cabinet Gorge dams in Montana.

Lake Pend Oreille is regulated by Albeni Falls Dam as part of the Columbia River system for downstream power and flood control. The normal summer level is at elevation 2062.5. Beginning in September, the lake is drafted at a nearly uniform rate to reach elevation 2060 by the end of October. This procedure minimizes lake

shoreline erosion. A continuing draft may be made until December for system power purposes if needed. Normally, the lake is at winter flood control level by December 1. Between then and spring, the lake is held at a nearly constant level. When springtime flood inflows occur, the spillway is opened allowing free flow. The lake then rises as it would without a dam. As the flood recedes, the lake is allowed to return to the normal summer level.

Priest Lake is controlled by a small dam originally constructed in 1950 and rebuilt in 1978. This structure is used during the summer to hold the lake at a nearly constant level about three feet above the natural lake summer level. Following the recreation season, the stored water is released for downstream power. The dam is operated by Washington Water Power Company under an agreement with the Idaho Department of Water Resources, owner of the dam.

The presence of an outlet control has produced a pronounced shift in outflows from July through November. The July and August outflows have been reduced by approximately 40 percent, and September outflows by about 30 percent. The October and November discharges have been increased by about 250 percent due to evacuation of storage. Discharges during the remainder of the year are relatively unaffected.

Lake Coeur d'Alene is controlled by Post Falls Dam on the Spokane River nine miles downstream from the lake outlet. Post Falls Dam is operated by Washington Water Power Company for power generation on site and at several other plants in Washington. The normal summer level of the lake is elevation 2128. Beginning in September, it is drafted three to five feet for power generation purposes. This lowering of the lake elevation also provides winter flood protection for lake shoreline properties and downstream points. Winter lake levels are quite variable as inflows fluctuate. Following spring runoff, lake levels decline to elevation 2128, the gates are closed and the dam is operated to hold the lake at that level through the summer.

Ground Water Trends

Since 1976, when the State Water Plan was adopted, ground water levels have shown a general decline throughout the state. Of the 359 wells monitored since 1976, 285 or 79 percent have shown an average decline in ground water levels of 7.54 feet. An average increase in ground water levels was indicated in 74 of the wells or 21 percent. The extremes range from an increase of 29.50 feet to a decline of 78.54 feet. Over 15,000 well logs have been filed with the Department of Water Resources in the period (see Table 4). During the same period, 4635 applications were filed to appropriate the ground waters of the state. Almost 7000 wells were drilled in the 1977-78 period apparently in response to the 1977 drought. Three times as many ground water applications were filed in 1977 than 1981.

Table 4. Numbers of Applications to Appropriate Ground Water and Well Logs Filed by Calendar Year.

Calendar Year	Ground Water Applications	Well Logs
1977	1,893	3,056
1978	663	3,764
1979	722	2,987
1980	697	2,911
1981	660	2,495
1982	4,635	15,213

Since 1976, a downward trend in the ground water levels of the Rathdrum Prairie and in the Lewiston basin has occurred while ground water levels rose slightly in the Moscow basin.

Ground water levels showed a slight downward trend in the upper Payette Valley and in the upper Weiser Valley while ground water levels rose significantly in the lower Weiser Valley. In the lower Payette Valley water levels varied only slightly.

In the Pahsimeroi Valley, moderate ground water level declines occurred while water levels rose in the Lemhi Valley and in the Salmon River Valley above Salmon, Idaho.

In central Idaho, ground water levels in Camas Creek and Silver Creek Valleys declined significantly with two wells lowering more than 30 feet. Several wells in these basins had slight to moderate increases; one well rose over 13 ft.

Declines in the ground water levels in the majority of wells on the Snake River plain range from slight to significant with a few scattered wells showing increases. The amount of decline varied with depth and location.

Ground water levels in the western Snake Plain declined slightly to significantly in areas including the Mountain Home plateau. The Cinder Cone Butte and Blue Gulch Critical Ground Water Areas are located in the Mountain Home area and Salmon Falls Creek area, respectively. Water levels in a few scattered wells rose somewhat in those areas.

Several ground water basins in southeastern Idaho flow south into Utah. Decline of the ground water levels in these basins was moderate to significant with a few wells also displaying slight to moderate increases.

Ground water levels in Raft River, Rock Creek, and Goose Creek all showed significant declines. Several of the wells had declines of more than 20 feet over the 5 year period. The Raft River, Artesian City, Cottonwood, and Oakley-Kenyon Critical Ground Water Areas are located in these drainages.

The general overall downward trend over the past five years is related to below normal precipitation the last five years and an increase in the amount of ground water being pumped.

THE IDAHO STATE WATER PLAN

Article 15, Section 7, of Idaho's Constitution called for the formulation and implementation of a State Water Plan "for optimum development of water resources in the public interest." The state's water resources have been inventoried, problems identified, and the needs of a growing population, expanding agriculture, industrialization, and protection of the environment have been recognized and incorporated into a State Water Plan.

The State Water Plan coordinates the multiple uses of the state's water resources and considers all beneficial uses presently recognized under Idaho law. Based upon existing uses, it is a plan providing new opportunities, recognizing old and new values. This plan is based on inventories of Idaho's water supply, knowledge concerning present water use, public desires and information concerning future water needs. Idaho's water supplies are to be utilized to meet the economic and environmental needs of Idaho's citizens.

The State Water Plan is not meant to be a "fixed document" but a dynamic process which has as its purpose the protection of the quality of life enjoyed in Idaho. It includes an allocation of presently unused water for economic uses and industrial growth while at the same time providing a variety of programs to protect the natural environment. The plan does not propose specific projects but serves as a framework within which private enterprise and federal, state, and local entities can propose water resource projects.

Objectives

The State Water Plan is composed of Objectives and Policies.

The objectives are the state water planning criteria and are reviewed annually by the Water Resource Board. They are stated as follows:

1. **Beneficial and efficient water use:** The policy of the Idaho Water Resource Board is to follow a broader definition of the term "beneficial use of water" to include all water uses, both consumptive and nonconsumptive (for example, stream resource maintenance flows) and to seek implementation of those water resource projects and programs which provide for this definition through efficient water use practices.
2. **Electric energy:** The Idaho Water Resource Board adopts as a planning objective, a reduction in the reliance upon imported electric power. To achieve this objective, the state water resource policy is to promote and encourage those projects and programs which provide for the development of new electrical energy and more efficient use of existing energy sources.

3. **Environmental quality:** The policy of the Idaho Water Resource Board is to maintain, and where possible enhance, environmental quality in Idaho.
4. **Erosion and sedimentation:** The policy of the Idaho Water Resource Board is to ensure that projects and programs adequately consider their effects with regard to the erosion and deposition of the soil.
5. **Fish and wildlife:** The policy of the Idaho Water Resource Board is to give equal consideration to the needs of fish and wildlife in any project or program designed to promote conservation, development, and optimum use of the state's water resources. The board recognizes that fish and wildlife are important elements of the state's economy and quality of life and will recommend stream maintenance flows in the basin reports.
6. **Fish-farming (aquaculture):** The policy of the Idaho Water Resource Board is to support continued growth of the aquaculture industry.
7. **Flood damage reduction:** The Idaho Water Resource Board adopts as a planning objective the preference of management over structural alternatives in reducing or preventing flooding damages.
8. **Food and fiber (agriculture):** The policy of the Idaho Water Resource Board is to seek an orderly growth of agricultural production in the state at a rate sufficient to maintain the state's current share of the national and international market.
9. **Indian lands and related water resources:** The Idaho Water Resource Board adopts as a planning objective the protection of the natural resources and community environment of Indian reservations in Idaho. To achieve this objective, the state water resource policy is to cooperate with the Indians and tribes to identify and inventory their resources as a first step toward formulation of a resource plan.
10. **Interbasin water transfer:** The Idaho Water Resource Board adopts as a planning objective opposition to interstate transfer and diversion of water from Idaho.
11. **Recreation:** The policy of the Idaho Water Resource Board is to support those projects and programs which are designed to protect and enhance recreational opportunities in Idaho.
12. **State-federal rights:** The policy of the Idaho Water Resource Board is to actively promote state control over the use and conservation of Idaho's water resources. As a positive means to help resolve the question of federal versus state jurisdiction of water uses, the Board supports the proposal for enactment of federal legislation which would require all federal rights and responsibilities to be clearly identified. This should be done in cooperation with state agencies and the effects clearly identified in the basin reports. Board-proposed projects and programs, and those brought to the Board for approval or concurrence, will be evaluated as to their effects on maintaining a strong position with regard to state control of all water uses.
13. **Wild and scenic rivers:** The policy of the Idaho Water Resource Board is to support the concept of designating selected Idaho river segments as "wild and scenic," through either federal or state programs, so that legal protection can be provided to insure that the rivers and their immediate environments are preserved for the benefit and enjoyment of present and future generations.

The Idaho Water Resource Board adopted the State Water Plan as the basis for future water resource management. The following policies were adopted by the Idaho Water Resource Board and are in conformance with the constitutional and legislative directives given the Board:

POLICY 1
Public Interest

Applications for future water permits shall not be approved if they are in conflict with the State Water Plan adopted by the Idaho Water Resource Board in the public interest. Section 42-203, Idaho Code, should be amended to provide the following: (1) protection for all existing water rights. Nothing in this plan shall adversely affect water rights established and vested under the Constitution and laws of Idaho; (2) all new water uses both consumptive and non-consumptive such as irrigation, municipal, industrial, power, mining, fish and wildlife, recreation, aquatic life, and water quality will be judged to have equal desirability as beneficial uses subject to Article XV, Section 3, of the state Constitution; (3) if conflicts occur between meeting new water uses, the approval or denial of the application shall consider the public interest including an evaluation of the beneficial and adverse economic, environmental and social impacts as identified in the State Water Plan as adopted by the Idaho Water Resource Board.

Presently there are four criteria that must be considered by the director of the Department of Water Resources in approving or denying an application. The present criteria are:

1. Is there a water supply available?
2. Does the proposed use interfere with existing rights?
3. Does the applicant have sufficient financial resources with which to complete the work involved?
4. Is the application made for delay or speculative purposes?

This policy proposes a fifth criteria: will the proposed use conflict with the State Water Plan adopted by the Idaho Water Resource Board in the public interest?

Since statehood, questions have been raised as to whether it is in the public interest to issue water rights without considering their effect upon those not directly affected by the proposed diversion. In disputes, the question of an application being in the public interest has been raised. In the recent Malad Canyon Case, the Idaho Supreme Court decision contains language suggesting that decisions be made on a case-by-case basis as to whether a proposed appropriation of water is a beneficial use. That language seems to indicate that the question of whether the proposed use is beneficial in the public interest should be addressed. Decisions

made by the director could be appealed to District Court if any applicant was dissatisfied with the director's decision. The proposed criteria applies only to new applications.

POLICY 2
Nature of Use of Water Rights

Water users should be allowed to change the nature of use of their own water rights for use within the State of Idaho provided other water rights are not injured thereby. Section 42-222 should be amended to allow existing water right holders to make such changes provided the change is not in conflict with the State Water Plan adopted by the Idaho Water Resource Board.

As water uses increase and conflicts arise, many new uses will depend upon transferring existing water rights from one use to another. The Idaho Code is now silent as to the authority and procedure to be used. Section 42-222 should be amended to permit such transfers and provide adequate protection to other right holders and the public. Such provisions would reduce future conflicts if changes can take place in a regulated market system, particularly in changes from consumptive uses to non-consumptive uses. The proposed amendment should address the question of urban areas encroaching on irrigated farm lands and identify an equitable procedure to remove urban areas from irrigation districts. Maintaining agricultural lands in production should be considered as in the public interest.

POLICY 3
Consolidate State Water Quantity and Quality Planning and Administration

The state programs of water quantity and water quality planning and administration should be consolidated in the Department of Water Resources. The Idaho Code should be amended to implement this policy.

Planning and administration of water quantity and water quality are presently divided between two state agencies even though they are two directly interrelated physical properties of the same source. The Department of Water Resources is responsible for programs relating to water quantity and the Department of Health and Welfare is responsible for protecting the quality of the state's water. To attempt to solve problems involving either property of the water resource without considering the other compounds problems.

Different levels of funding and different planning schedules have not permitted water quantity planning and water quality planning to be fully integrated in the State Water Plan. Recently, because of P.L. 92-500 and extensive federal government efforts to protect and improve water quality, new programs closely paralleling ongoing activities are being initiated. Because of this, and the present split responsibilities, there is some confusion among water users and the public of Idaho.

The responsibility to issue and control rights to use waters of the state rests with the Department of Water Resources. However, only minimal authority rests with the Department of Water Resources to consider the water quality effects of the proposed use of those waters. Such effects could be analyzed and defined at the time of issuance of a water right permit instead of placing the water user in a position of having to comply with an effluent limitation after he has already spent

time and resources on initiating the use according to his permit. The same department responsible for controlling the diversion of water from the stream or groundwater body could monitor the eventual return flow from that use.

A combination of water quantity and water quality planning and management would neither increase nor diminish the goals of either program. It would help to reduce confusion and improve service to the public. The consolidation of water quantity and water quality planning and administration should not diminish any state or national goal to improve the quality of the state's water.

POLICY 4
Unrecorded Water Rights

Claims should be submitted on all existing unrecorded water rights within the State of Idaho by June 30, 1982. Legislation implementing this policy should provide that failure to file such a claim by the prescribed filing date shall be grounds for forfeiture of the claimed right.

Many rights in Idaho date from early periods when filing on water rights was not required. Adequate protection cannot be given to existing holders of such rights as pressures for water use increases unless their rights are defined and recorded. Unrecorded rights are a source of uncertainty for those comtemplating new development and present difficulties to those responsible for planning and allotting water supplies. Both existing and future water right needs would be served by filing of all unrecorded claims. This procedure may ultimately result in an adjudication of all rights on all streams in Idaho. In the absence of a filing of unrecorded claims, new irrigation and instream flow claims could exceed available water supplies and claimants could be severely injured.

POLICY 5
Flood Prone Area Identification

The sellers of parcels of land within flood prone areas as identified by the Department of Water Resources should be required to notify the buyer in writing that such lands are within such flood prone areas. Written notification, with an acknowledgement by the buyer, should be recorded with the title to the lands. Legislation implementing this policy should also provide that the buyer may recover damages from the seller if the seller fails to so notify the buyer.

Prospective buyers should be made aware of identified flood prone areas. The pressures to develop areas subject to periodic flooding will continue to increase as population increases, available lands diminish, and second homes become more prevalent. Buyers should realize that flood prone areas require special construction provisions to avoid flood losses. Public investment in flood fight and flood damage reduction projects is increasing at such a rapid rate that all nonstructural steps also should be taken to reduce potential damages. This can be accomplished only if purchasers and sellers fully realize the damage potential and provide for potential

flooding. The Departmemt of Water Resources would utilize existing flood plain studies in establishing uniform and consistent flood prone area boundaries. Federal guidelines and regulations contained in the Flood Disaster Protection Act of 1973 may be modified in the future and lose much of their effectiveness in preventing future flood damages. Idaho should evaluate all flood control rules and regulations in considering this policy.

POLICY 6
Instream Flows

Water rights should be granted for instream flow purposes. The legislation authorizing this policy should recognize and protect existing water rights and priorities of all established rights and delegate responsibilities for determining flows and administrative authority to the Department of Water Resources. The legislation should also direct that the Idaho Water Resource Board shall be the only applicant for instream flow.

Instream flows are essential to many uses of the state's water resources, including hydropower production, fish and wildlife propagation, recreation and navigation. Many of the uses have direct effects on the economy while others represent elements of Idaho's valued environment. Presently no procedure exists for establishing a right to an instream flow from the unappropriated waters of the state. The Idaho Supreme Court, in the Malad Canyon Case of the State of Idaho, Department of Parks vs. State of Idaho Department of Water Administration, indicated that a procedure could be adopted by the legislature. In order to protect present economic and environmental uses, such a procedure is an integral portion of the State Water Plan.

Methodology to determine instream flows for fish, wildlife and recreation has not been available until recent years and even now some streams are difficult to evaluate due to physical characteristics and resident species. In Idaho, instream flows should be evaluated to achieve a stream maintenance flows (SRMF). SRMF's are defined as a range of flows within which all aquatic life and related recreational activity are maintained and protected. The Idaho Water Resource Board believes this policy will further protect existing water rights because water would be appropriations to dry up a water supply.

The basic provisions of instream flow legislation should include:

1. The name of the stream and legal description of the point on, or reach of the stream where the instream flow is proposed to be appropriated and determined;
2. The instream flow proposed in cfs;
3. The purposes for which the instream flow appropriation is proposed to be made;
4. The period of time or season of the year during which said appropriation is proposed;
5. Will not interfere with any vested water right, permit, or water right application with a priority of right date earlier than the date of receipt in the office of the director, Department of Water Resources, of a complete application for appropriation of instream flow filed under the provisions of this act;
6. Is in the public, as proposed to private, interest;

7. The extent to which flows are necessary for the preservation of fish and wildlife habitat, aquatic life, recreation, aesthetic beauty, navigation, transportation, power generation, or water quality of the stream;
8. The extent to which flows are capable of being maintained as evidenced by records or streamflows and water levels, and the existing or future establishment of necessary gaging stations and bench marks;
9. Identify the Idaho Water Resource Board as the only applicant for instream flows.

POLICY 7
State Natural and Recreational System

A State Natural and Recreational River System should be established and designed to fit the desires of the citizens of Idaho. Legislation implementing this policy should permit the protection of the unique features that exist on each of the various rivers within the state and should provide the necessary authorization and adequate funding to state and local government to protect such rivers and related lands for recreational, scenic, and natural values while still allowing the widest possible opportunity for use by private interests. Funds would be provided from the Water Management Fund created under Policy 31 for this purpose.

In recent years, Idahoans have expressed a desire to retain some rivers in a free-flowing condition. However, at the present time no state legislation exists to accomplish this objective which limits protection to that which can be provided by the federal government through the National Wild and Scenic Rivers Program. A state system would be more responsive to the needs and desires of Idahoans and could be managed to improve the recreational sector of the state's economy.

The system should be composed of two parts: (1) natural rivers utilizing a natural wilderness type of management and administration; and (2) recreational rivers utilizing a rural, agricultural or urban type of management and administration. Administrative jurisdiction would be at the state level. Existing land and water uses generally should not be preempted, but preserved. Authorization should be provided, however, for purchase of future development or change of present land use rights.

The State Natural and Recreational River System is designed to protect and preserve free-flowing river values. It should be equal to the National Wild and Scenic Rivers System in authority. All rivers in the Idaho system should be relatively free of pollution and the water quality sufficiently high to meet primary management purposes. Instream flows should be established for each river segment in the system and any future development, improvement, diversion, or impoundment in, above, or below the classified river segment should be regulated so as to protect the streamflows and free-flowing condition of the river segment.

The river classifications should be in two parts, defined as:

1. **NATURAL RIVERS** or those rivers or sections of rivers that are free of diversions and impoundments, inaccessible to the general

public except by water and foot- or horse trail, and with river area primitive in nature and free of manmade developments except foot bridges.

2. **RECREATION RIVERS,** or those rivers, or section of rivers, that are relatively free of diversions and impoundments. A river should not be excluded from classification due to small dams. There can be general road access with river areas largely undeveloped or which are partially or predominantly used for agriculture, forest management and other dispersed human activities which do not substantially interfere with public use and enjoyment of the rivers and shorelands.

Limited existing exceptions to the criteria for both classes of river should not be an automatic basis for exclusion from designation. Rather, the river area should be examined as a whole with its overall worthiness for inclusion being the deciding factor. Studies should identify the following:

1. All proposals should be evaluated to determine whether designation and management could be accomplished under a state or local program. Preference will be given to the inclusion of river segments under a state or local program so that control will remain at the state level.
2. All proposals (federal and state) must clearly identify the environmental, economic, and social impacts.
3. An analysis of the benefits and costs associated with the operation

Policy 31 provides the funding to administer such a program. Stream segments or reaches considered as having potential for inclusion in a State Natural and Recreational River System include:

SNAKE RIVER BASIN

1. Salmon River - North Fork to mouth
2. Salmon River - headwaters to North Fork
3. South Fork of Salmon River, including the East Fork of South Fork and Johnsons Creek
4. Bruneau River - stateline to Bruneau Valley, including Sheep Creek and Jarbidge River
5. Owyhee River and tributaries
6. Henrys Fork - Warm River to Big Springs
7. Teton River - headwaters to confluence with the North Fork Teton River
8. Payette River - North Fork
9. Payette River - South Fork

PANHANDLE BASINS

1. North Fork Coeur d'Alene River
2. Lower Priest River
3. St. Maries River
4. Kootenai River
5. North Fork St. Joe River
6. Pack River

BEAR RIVER BASIN

1. Cub River

POLICY 8
Greenway-Greenbelt Program

State and local greenway and greenbelt systems should be established. Legislation implementing this policy should provide for local county and city government planning, regulations, and administration of lands adjacent to Idaho's rivers. State financial and technical support would be provided on a project by project basis. Funds would be provided from the Water Management Fund created under Policy 31 for this purpose.

Numerous rivers in the state are in scenic settings and attract many visitor days of use. Most, however, do not qualify for consideration as "wild river" but instead are day-use oriented. As Idaho's population continues to grow, an opportunity exists for local government to capitalize on these areas for recreation.

A greenway is a system of open or park lands located along a river or stream created through local zoning or voluntary easement. Public access is not guaranteed under this concept.

A greenbelt is a system of open or park lands located along a river or stream acquired by voluntary sale, willing buyer — willing seller. Purchase of the lands by a public entity guarantees public access.

As an aid to local government interpretation, the guidelines would include:

1. Recognition that river resources are depletable and that their protection and enhancement is in the public interest;
2. Farm use is desirable and should be an integral part of the greenway/greenbelt. Farmland is depletable and should be conserved;
3. Preservation of historic sites and protection of scenic views to and from the river or stream should be accomplished;
4. Adjacent lands should be classified as to their ability to sustain various human activity and managed in the greenway/greenbelt system accordingly;
5. Access to and along the river should be obtained as needed, and parks and open space are to be encouraged;
6. Farm use zoning, equitable taxation practices, easements, and other methods aimed at perpetuating farm use should be encouraged and employed to the fullest extent.

Each city and county should prepare plans for their portion of the greenway/greenbelt at a scale suitable for local plans. These plans should magnify local values, needs, and interpretations, within the general framework of local goals and legislative guidelines.

The following areas should be given early consideration for inclusion in a greenway:

SNAKE RIVER BASIN

1. Snake River
2. Boise River
3. Big Wood River
4. Payette River
5. Portneuf River
6. Teton River
7. Big Lost River
8. Rock Creek at Twin Falls

PANHANDLE BASINS

1. Kootenai River
2. South Fork Coeur d'Alene River - Mullan to Enaville
3. St. Joe River - through St. Maries
4. Priest River - McCabee Falls to Pend Oreille Lake

BEAR RIVER BASIN

1. Bear River

POLICY 9 Lake and Reservoir Surface Management Plan

State and local units of government should prepare lake and reservoir surface managment plans. The authorizing legislation should also define and adopt procedures and provide for enforcement. Funds would be provided from the Water Management Fund created under Policy 31 for this purpose.

Comprehensive plans and management guidelines should be prepared concerning surface uses of Idaho's lakes and reservoirs relative to the conservation, development, and protection of these resources. These guidelines should define appropriate uses of lakes and the portions of lakes wherein certain uses can be conducted. Size of motors and boats allowed, allowable speed, prohibition of motors or houseboats, scheduling of log tows, and regulating the time at which various uses may be conducted are basic considerations.

Such a plan should be prepared jointly by local and state agencies with assistance from federal agencies where appropriate. The plan should be subject to adoption by the Idaho Water Resource Board as part of the State Water Plan. Lakes and reservoirs affected by this recommendation include:

SNAKE RIVER BASIN

Alturas, Redfish, Williams, Upper Payette and Little Payette, Warm and Henrys lakes, and Anderson Ranch, Arrowrock, Black Canyon, Brownlee, Cascade, Deadwood, Deer Flat, Hells Canyon, Horsethief, Lost Valley, Lucky Peak, Spangler, Little Camas, C.J. Strike, Fish Creek, Little Wood, Mackay, Magic, Murtaugh, Roseworth, Salmon Falls, Sublett, Walcott, American Falls, Ashton, Blackfoot, Chesterfield, Island Park, Palisades, Dworshak and Paddock reservoirs.

PANDHANDLE BASINS

Priest, Pend Orielle and Coeur d'Alene lakes

BEAR RIVER BASIN

Bear Lake

POLICY 10 Protection of Lakes and Reservoir Shorelands

Local units of government should prepare comprehensive plans and adopt zoning standards for the management of lake and reservoir shorelands to protect the water resources and its uses. Title 67, Chapter 65, Idaho Code, the Local Planning Act of 1975 should be amended to implement this policy. Funds would be provided from the Water Management Fund created under Policy 31 for this purpose.

Lake and reservoir shorelands are being used in increasing proportions. Often when land-use abuse occurs, the resulting eroded material, or other pollutant, ends up in the lake or reservoir. Use of the shorelands should continue; however, locally prepared plans could reduce problems.

The amending legislation should specify the values to be preserved and protected. Authority should be included for standard ordinances and local ordinances should require protection at least equal to the adopted standard ordinance. The lakes and reservoirs identified in Policy 9 should be analyzed under this recommendation.

POLICY 11
Water Supply Bank

A water supply bank should be established for the purpose of acquiring water rights or water entitlements from willing sellers for reallocation by sale or lease to other new or existing uses. Legislation authorizing the water supply bank should also provide for the bank to be self-financing in the long run with initial funding to be provided by creation of a Water Management Fund as provided for in Policy 31.

The state is approaching a situation where all water supplies capable of being developed have been utilized. Presently there is difficulty in finding buyers for blocks of water when such water becomes available, primarily because the water rights for sale are either too small to be made into an economical block or too large for a single buyer to acquire. This proposal would create a self-financing program for the acquisition and sale of water entitlements and would act as a mechanism to acquire and hold water for future users. Water rights would be purchased from willing sellers and then resold to new users at a cost sufficient to cover expenses associated with the original purchase. Water rights held in the bank for future uses could be "leased" or "rented" for interim uses to cover costs of administering the bank until resold. Public benefits derived would be considered.

POLICY 12
Conservancy Districts

Water Conservancy Districts should be established where needed. Legislation implementing this policy should provide for an equitable funding procedure to spread costs among all beneficiaries.

A mechanism is needed to finance obligations and operate areawide water conservation or groundwater recharge projects and programs. Beneficiaries of groundwater recharge projects will be all residents who receive sustained or augmented water levels or quantities of water from wells. Presently there is no mechanism to spread the obligation for such projects over the area benefited. Conservancy Districts could include or supplement several other types of districts such as Irrigation Districts, Drainage Districts and Weather Modification Districts, and should have authority to collect assessments based upon evaluation of benefits to specific classes of users.

A water conservancy district would have power to own and operate storage, diversion and delivery systems to provide the total water needs of large geographic parts of the state such as river basins or single or multi-county areas. It would have authority to levy taxes on all property benefited and to bond and contract for project construction. Water could be supplied for irrigation, domestic, municipal, industrial, recreation, and other purposes. Such districts could also sponsor artificial groundwater recharge projects and thereby distribute the costs over the entire population of an area which indirectly benefits from such a project. They could also integrate the use of the surface and groundwater resources of a river basin for more efficient use of available resources in periods of low and high streamflow.

POLICY 13
Energy Plan

A State energy plan should be prepared. The Department of Water Resources should contribute the water related components to such a plan. Legislation authorizing this policy should also provide funding through the Energy Development and Study Fund for this purpose as provided in Policy 31.

Energy production will be continuing major problem for Idaho and the Pacific Northwest as well as the nation. In 1974, Idahoans consumed the following quantities of energy:

Electricity - 11,723 x 10564 KWH
Oil - 3.922 million barrels
Natural Gas - 40.970 billon cubic feet
Coal - .464 million tons
Gasoline and Diesel - 62.7 trillion BTU equivalents

Energy use and production may involve significant quantities of water. Presently Idaho is only producing electrical energy at hydro-generating facilities and does not have any commercial coal, oil or natural gas developments. Idaho is served by numerous public and private business concerns that buy energy in other parts of the nation and ship it to Idaho for consumption. All energy uses are projected to increase. Historical average annual load growth for electricity has been 8.3 percent per year since 1950.

The dilemma facing Idaho is where and how to attract energy supplies when few energy sources are located in Idaho. As Idaho's economy continues to grow energy supplies will be faced with a multitude of problems in meeting energy demands. The location, size, and effects of new facilities are of vital concern to all citizens.

Since any one energy supplier serves only a part of the state, and some of the future developments will be extremely large, it is desirable to prepare a statewide energy plan, to inform the public and to offer assistance where needed. Information in the State Water Plan is the first attempt to measure statewide concerns, problems, impacts, and needs of electrical energy. This activity should be continued.

A state energy plan should address all forms of energy utilized in Idaho's economy. Specifically, the energy plan should evaluate sources, availability, cost relationships, regional growth and local management, conservation programs, reservation of conventional and pumped storage and hydroelectric generating sites, thermal plant siting, downstream hydroelectric plants, research and development of new sources, and information and education programs.

Claims to water by Idaho Indian tribes should be identified by June 30, 1982.

POLICY 14
Water Claim by Indian Tribes

Indian tribes in Idaho should be encouraged to complete water and land resource inventories and adopt plans for their development, conservation, and preservation.

Each tribe has an inventory and planning program underway, however, no conclusions have been reached. Reservations affected by this Policy include:

SNAKE RIVER BASIN

Fort Hall
Duck Valley
Nez Perce

PANHANDLE RIVER BASINS

Coeur d'Alene
Kootenai

BEAR RIVER BASIN

None

Claims to water by the federal government should be identified by June 30, 1982.

POLICY 15
Federal Water Claims

The large acreage of federal lands in Idaho, coupled with the present attitude of the U.S. Department of Justice regarding waters reserved to those lands, poses problems which need immediate attention and resolution. The federal government claims sufficient water was reserved for federal lands to develop for any use consistent with the reservation, without reliance upon state water law. Approximately 64 percent of the land base in Idaho is federally owned and no claims have been submitted for development or preservation of those lands. Federal government claims, if any, for those lands should be submitted by June 30, 1982, or sooner to provide the basis for fully evaluating Idaho's water resources and related land resource availability.

An agreement should be established with federal agencies to allow review by the Idaho Water Resource Board of any proposed allocation of water in excess of 500 acre-feet annually from federal reservoirs.

POLICY 16
Federal Reservoirs Water Allocation

The Idaho Water Resource Board would be guided in such a review by the conformance of the proposed allocation with the State Water Plan. Such actions are necessary if the State Water Plan is to be implemented in a coordinated manner. This policy would not encroach upon the authority of the federal agencies to operate the facilities according to congressional authorization but would help to ensure that their actions occur with state review and concurrence. This procedure has been followed informally in the past, but should be formalized to avoid misunderstanding and identify the basis of such review for the interested public.

POLICY 17
State Administration of Federal Programs

Federal programs dealing with water should be administered by the state when the state has the option to do so.

Specific examples of such federal programs are: P.L. 92-500, the Federal Water Pollution Control Act Amendment of 1972, including the 404e permit program of the Corps of Engineers; P.L. 93-523, Safe Drinking Water Act of 1974; the Federal Dam Safety program; and the National Wild and Scenic Rivers program. State administration of such programs could preserve the opportunity of the citizens of the state to affect the approach to and method of administration of such programs.

POLICY 18
Combine Application for Water Resources

Existing state statutes should be reviewed and amended so that applicants may complete a single application form to request approval from necessary state authorities to develop or utilize the state's water and related land resources.

This policy is intended to assist the public of Idaho in complying with the laws of the state by consolidating forms and centralizing water regulations. In addition, it should increase the efficiency of handling requests and improve cooperation in protecting the public interest in the state's natural resources. Agencies responsible for administering the various resource laws should be given one year to jointly study and adopt such a procedure.

POLICY 19
Legislative Committee

A Legislative Committee on Water Resources should be appointed to work with the Idaho Water Resource Board in implementing the State Water Plan.

The State Water Plan represents the public interest in water resources. The policies involve substantial legislative and management changes. It is imperative that the legislature and the public of Idaho have a full understanding of resource potential, availability and demands in fully implementing the State Water Plan. If a water plan for Idaho is to gain the greatest benefits to Idaho citizens, a cooperative effort to implement the elements of the plan is imperative. Through a committee effort, the legislature can gain a comprehensive understanding of the plan and its impacts.

POLICY 20
Land Development Policy

Where the supply of water from a particular water source is limited, it is preferable to develop lands of higher agricultural productivity over those of a lower productivity.

As of July 1, 1976, applications to reclaim national resource lands under the Desert Land Entry Program totaled 1260 applications for 405,000 acres. Similarly, applications to develop land under the Carey Act Program totaled 141 applications for 600,000 acres. The total consumptive water requirements for these lands is approximately two million acre-feet. Some of the proposed development will utilize groundwater, however, the major emphasis is on the Snake River in southwest Idaho. Current applications for the Carey Act and Desert Land program if approved will exceed the supply in the Snake River in the Thousand Springs to Murphy reach during July and August. Some applications have been pending for several years and should be processed expeditiously. Dedication of the remaining available water supplies in this reach to higher classes of lands would assist in assuring that the greatest benefits are received from the dedication of those limited supplies.

POLICY 21 Protection of Potential Reservoir Sites

Potential reservoir sites should be protected against significant land use change. The legislation implementing this policy should recognize rights of existing land owners and should direct the state to acquire lands as they become available for sale. Reservoir sites given this protection should be re-evaluated on ten-year intervals. Funds would be provided from the Water Management Fund created under Policy 31 for this purpose.

Future economic development and population growth will bring additional demands on Idaho's water resources. In addition, many of the environmental objectives of water resource management require reliable, quality flows. Currently, no new major storage is proposed because of economic and environmental standards. In future years criteria and conditions may change as pressures increase and decisions may be necessary that will require the availability of such sites. Potential reservoir sites exist both on and off stream and the key sites need protection. In January, 1976, the Corps of Engineers completed a reconnaissance investigation of pumped-storage potential in the northwest. Forty-five sites were identified in Idaho and these need further consideration for possible site protection. Reservoir sites given protection should be selected carefully, however, the initial list should include but not be limited to:

Potential Reservoir	Stream
SNAKE RIVER BASIN	
Upper Snake	
Lynn Crandall	Snake River
American Falls (Exist.)	Snake River
Clear Lakes	Snake River
Thousand Springs	Snake River
Shoestring	Snake River
Warm River	Henrys Fork
Blackfoot (Exist.)	Blackfoot River
Driggs	Teton River
Medicine Lodge	Medicine Lodge Creek
Birch Creek	Birch Creek
Boulder Flats	Big Wood River
Bliss	Big Wood River

Southwest Idaho

Grindstone Butte	Snake River (off-stream)
Sailor Creek	Snake River (off-stream)
Guffey (High Alternative)	Snake River
Garden Valley	South Fork Payette River
Gold Fork	Gold Fork Payette River
Twin Springs	Boise River
Lost Valley (Exist.)	Lost Valley Creek
Tamarack	Weiser River
Goodrich	Weiser River
Monday Gulch	Little Weiser River
Lucky Peak (Exist.)	Boise River

Lower Snake

Challis	Challis Creek

PANHANDLE BASINS

Low Katka	Kootenai River

BEAR RIVER BASIN

Caribou	Bear River
Oneida Narrows	Bear River
Plymouth	Malad River
Thomas Fork	Thomas Fork

POLICY 22
Evaluate Flood Control Levees

The Department of Water Resources should be directed to inventory, identify and evaluate the adequacy of existing flood control levees. Idaho Code, Section 42-1708, should be amended to implement this policy.

Flood control levees built with federal funding are turned over to local entities to maintain. The degree of maintenance varies with the capability and diligence of the responsible organization. Levees built under emergency conditions sometimes have no maintenance provision. This situation creates a potential hazard wherein levees may deteriorate to the point of being unsafe and subject to failure. A false sense of security may result and potential damage may be greater than if the area were unprotected. A program of periodic inspection by the state as an adjunct to its program of dam safety inspection would insure that minimum standards are met. Any necessary remedial action could then be taken early enough to protect against levee failure.

POLICY 23
Assist Indian Tribes in Water Resources Identification

The Idaho Water Resource Board offers to assist Indian tribal representatives in the identification, evaluation, and tabulation of water resources on Indian lands.

This program would be designed to assist Indians in evaluating water resource uses and needs, with the goal of identifying, for both Indian and non-Indian benefit, Indian claims to water by June 30, 1982. This program recognizes that the Indians are the proper people to identify their own needs and desires. Assistance would be given upon request from the various Indian tribes. The program realizes the potential conflicts between Indian and non-Indian claims but recognizes that solutions probably can be found if adequate information is available. The date of June 30, 1982, corresponds with the date set for all non-Indian claims to be recorded.

POLICY 24
Safety Measures Program

A program should be established to assist local units of government in repairing and installing safety structures on or near canals, rivers, lakes, and reservoirs. The program should be established as a cost-sharing cooperative program with the state share at 75 percent and local share at 25 percent of each identified project. Funds would be provided from the Water Management Fund created under Policy 31.

Each year, numerous fatal accidents occur in the state's water because of the lack of preventive safety measures. Accidents are not confined to one area of the state nor one segment of the economy but are scattered throughout the state. Most Idaho cities are built on a water course and subsequently are plagued by hazardous canals, rivers or shorelands. Fencing, signing, debris removal, covering and other structures should be installed to provide for human safety. In the absence of safety structures and subsequent accidents, accusations and claims of responsibility cause community unrest. A preventive program could solve this problem. The Department of Water Resources should be directed to work with any unit of government to implement these programs.

Local units of government should be encouraged to conduct annual public awareness campaigns to educate the public on the dangers and hazardous nature of water bodies in their areas. This public awareness campaign could also include boating safety and an expanded learn to swim program.

POLICY 25
Rehabilitation Program

A program should be established to identify and evaluate rehabilitation of abandoned mineral extraction and by-product storage areas and other abandoned projects which currently or potentially affect the yield or quality of the state's watersheds, streams, and stream channels.

This program would identify hazardous or troublesome areas and recommend solutions. Current mining practices and storage areas would not be evaluated. Problems occur when mines and storage areas are abandoned and no upkeep or maintenance work is performed. Some areas have deteriorated so much that structural failure is occuring causing erosion, sedimentation and heavy metals to enter the state's streams. In years past the mining companies, government agencies, and general public tolerated a neglect of environmental quality as a tolerable cost

of economic gain. Recently the mining industry has reversed this pattern of neglect and has made substantial and visible progress in controlling water and air pollution incident to its mining operations. The industry has made very substantial expenditures for treatment facilities which have resulted in major reductions in the discharge of pollutants. Leaders in the mining industry have taken the initiative with local government officials to pass bond sewage treatment facilities for control of water pollution throughout the South Fork of the Coeur d'Alene River. The discharge of raw sewage and of mining wastes has ceases. However, the problems of the past remain. Problem areas are scattered and include the Boise, Owyhee, Salmon, and Coeur d'Alene rivers.

Numerous early water and related land projects were built and later abandoned. Some of the projects have deteriorated to the extent that public safety is threatened and potential damages would exceed rehabilitation costs by a wide margin. Funding for study and rehabilitation work would come from the Rehabilitation Fund proposed in Policy 31.

POLICY 26
Monitor Radioactive Waste Disposal

A program should be established by the State of Idaho to monitor and regulate radioactive waste disposal at the U.S. Energy Research and Development Administration's Idaho National Disposal Engineering Laboratory, and other areas as may be designated.

The existing program for radioactive monitoring at the Idaho National Engineering Laboratory (INEL) is conducted by the Health Services Laboratory of the Energy Research and Development Administration. In their comprehensive monitoring program radioactivity released from INEL operations is measured in air, water and soil at both on-site and off-site locations. Radioactivity in some agricultural products from the INEL area also is measured. An annual report on radioactivity monitoring results is prepared by the Health Services Laboratory and an assessment of the radiological impact from nuclear operations is made of that region surrounding the INEL.

Notwithstanding the quality of the current radiation monitoring program carried out by the ERDA and its Health Service Laboratory, it is recommended the state establish an independent program for sampling, analysis, and data interpretation. The INEL area overlies portions of the Snake Plain aquifer and every precaution must be taken to preserve its quality.

POLICY 27
Fish and Game Plan

A program should be established within the Idaho Department of Fish and Game to prepare and adopt objectives and management criteria for fish, wildlife, and all other aquatic resources for all principal streams and wet-lands in the state.

It is difficult to protect acquatic resources without a clear definition of objectives and management criteria. Fish and wildlife resources and habitat are

located in virtually every area of Idaho, however, many habitat areas have other potential uses. Instream habitat will be under increasing pressures as additional diversions are made and as greater numbers of Idahoans use these fish and wildlife resources. Definitions of objectives and management criteria would facilitate decisions necessary to protect those resources.

POLICY 28 Tailing Ponds

Encourage the mining industry to work with federal and state agencies to achieve uniform safety standards for the construction of tailing ponds and other similar mine waste storage facilities. If agreement cannot be reached under existing laws and policies then legislation should be adopted placing tailing ponds and other similar mine waste storage facilities under jurisdiction of the Dam Safety Act (I.C. 42-1714 et seq).

In an effort to improve the deteriorated water quality in the South Fork Coeur d'Alene River, and to protect existing water quality in other mining areas throughout the state, numerous tailing settling ponds have been constructed. Presently, regulatory authority for uniform construction standards, maintenance inspection, or long-term maintenance responsibility for these ponds does not exist. These deficiencies, combined with the absence of adequate hydrologic study in site selection, have caused failures. These failures destroy fish habitat and cause extensive water quality deterioration as well as place increased stress on similar structures.

POLICY 29 Planning Program

A Water Resource Project Feasibility Planning Program should be established to conduct studies required to implement the State Water Plan. Funds would be provided from the Water Management Fund as provided in Policy 31.

The State Water Plan establishes a new direction in water resource management based on existing water authorities, however, implementation of the State Water Plan will require additional study and investigation. Some of the problems requiring further study will be statewide in scope and others will be of a local nature.

STATEWIDE

Statewide investigations include studies of those problems of statewide significance. They may be inventories or feasibility grade studies depending on the intensity of the study effort.

- Investigate potential for incorporating flood control storage in existing private and public reservoirs where flood damage reduction is not now a recognized purpose. Such studies should describe fully the possible physical, legal and institutional effects, if any, of such operations on existing uses.
- Review and update information and criteria for use in determining reasonable groundwater pumping lifts in Idaho.

- Complete an inventory of off-stream reservoir sites.
- Investigate potential energy production sites and the potential environmental effects of using each. Such a study should include expansion of existing hydropower and potential new sites, pump-back power sites, and thermal power sites, and associated transmission and transportation network.
- Identify mineral extraction waste disposal areas that may represent economic alternatives to stream side disposal dumps.
- Evaluate upstream storage alternatives in Idaho as a solution to the rising water levels of Great Salt Lake.

LOCAL

Tributary investigations should encompass all water and related land problems on a local basis and result in specific solutions and feasibility reports consistent with the State Water Plan. Each tributary investigation should be conducted within a two-year period and programmed to allow active public participation as follows:

Snake River Basin (in order of priority)

Upper Snake	Southwest Idaho	Lower Snake
1. Heise-Neeley	Boise	Upper Salmon
2. Neeley-Miller	Bruneau	Palouse
3. Henrys Fork	Payette	Clearwater
4. Westside Tributaries	Weiser	Lower Salmon
5. South Fork	Owyhee	
6. Northern Stream		

Panhandle River Basins (in order of priority)

1. Spokane
2. Pend Oreille
3. Kootenai

Bear River Basin (in order of priority)

1. Lower Bear
2. Upper Bear
3. Oneida County

POLICY 30 Water Resources Research Program

Research should be conducted on important water resource topics to augment the State Water Plan.

The current water resources research program in Idaho is limited by manpower and funding limitations. Funding is approximately 60 percent from federal sources, 30 percent from state sources and 10 percent from private sources. An enlarged state contribution would in most cases attract additional federal and private research funds. Research should be organized under the following major categories for identification and prioritization:

1. Availability of quality water and related resources;
2. Planning techniques and methodology;
3. Impacts of water use;
4. Implementation criteria;
5. Management;
6. Public information and education;
7. Energy.

In some cases Idaho will be able to take advantage of research conducted in other states while other topics will require that original research be conducted in Idaho.

Areas of concern identified in the State Water Plan as needing immediate attention are:

- Identify legal and institutional changes necessary to improve water management.
- Investigate and evaluate waste water control measures of existing water uses.
- Investigate and evaluate potential for conservation of energy by existing uses. Estimate possible range of power savings.
- Investigate dry or unsaturated aquifer systems which could be used for long-term water storage and evaluate methods of recharging dry aquifers for water storage for multiple uses including low flow augmentation.
- Develop methods and varieties to increase Idaho crop yields up to amounts indicated by irrigation needs projections.
- Evaluate the effect of various levels of moisture deficiencies on crop yields.
- Evaluate methods of utilizing low temperature steam for electric energy production or other beneficial purposes.
- Evaluate methodology for determining instream water needs for fish and wildlife, and values created or preserved by providing or maintaining such flows.
- Investigate methods for encouraging more efficient use of water.
- Study augmentation of streamflow by use of anti-transpirants.
- Investigate expected frequency of recurrence of drought periods similar to those experienced in the last 70 years.
- Develop more efficient weather modification techniques.
- Investigate need for expanded monitoring program in critical groundwater areas.

Funding Policy

The greatest test confronting the State Water Plan is the commitment of adequate financial resources to insure its timely and orderly implementaton. Proposals contained in this report cover virtually all water uses of private, local, state and federal entities. In addition, the proposals provide a framework to coordinate resource management and use with the federal government. Water resource development, conservation, restoration, and preservation activities in future years will determine in a large part the quality of life Idahoans have. No one entity should be expected to finance or control all future water resource programs. Private financing will contribute the largest share of money for implementation. The federal government, because of previous commitments, the large federal land base, and extensive resource programs, is expected to finance some major water resource programs, however, federal financing appears to be increasingly difficult to secure and generally has stringent conditions attached to its use. The State of Idaho should invest part of its annual income in resource programs to maximize values. In previous years, the state has relied on the private sector and the federal government as the prime sources of financial responsibility. Without state financing for water resource programs, the people of Idaho can expect problems to intensify and public benefits to decrease.

POLICY 31
Funding Program

The State of Idaho should establish a major water resource funding program to supplement private and federal monies to develop, preserve, conserve, and restore the water and related land resources of Idaho and to implement the State Water Plan. The recommended funds are Water Management Fund, Rehabilitation Fund and Energy Development and Study Fund

1. WATER MANAGEMENT FUND

The Water Management Fund should receive annual appropriations, and be comprised of three subparts.

THE WATER SUPPLY BANK would assist in transfer of excess water from areas of surplus to areas of need. It would operate by handling water rights on a willing buyer and willing seller basis.

THE DEVELOPMENT PROGRAM would assist in development, study, and research for groundwater recharge, irrigation projects, flood control projects, municipal and industrial water supplies, navigation, watershed protection projects, aquaculture, hydroelectric development, surface storage, and water conservation programs.

THE ENVIRONMENTAL PROGRAM would assist preservation, restoration, enhancement of the natural environment, control of pollution, study and research for instream flows, rehabilitation of damaged streambeds, a State Natural and Recreational River System, water quality projects, greenways, greenbelts, and other environmental programs affecting water resources.

2. REHABILITATION FUND

The Rehabilitation Fund should receive annual appropriations. These monies would be used to evaluate and rehabilitate abandoned mines and by-product storage areas and other abandoned projects that adversely affect the state's water resources.

The Water Management Fund and Rehabilitation Fund would be administered by the Department of Water Resources as prescribed by the legislature and consistent with the State Water Plan.

3. ENERGY DEVELOPMENT AND STUDY FUND

The Energy Development and Study Fund should receive annual appropriations. These monies would be used to expand geothermal energy research and development, solar energy research and development, conservation studies, pumped storage studies, and assist other programs affecting the adequacy of electrical and other energy supplies. This fund should be administred by the designated energy agency with water resources components assigned to the Idaho Department of Water Resources.

Basin Policies

POLICY 32
Snake River Basin

The available and unappropriated waters of the Snake River Basin are allocated to satisfy existing uses, meet needs for future growth and development, and protect the environment. The allocations recognize and protect existing water uses and rights. The water allocations are made by large regions to allow the widest possible discretion in application.

Water Allocation Criteria

The greatest competition for water in the Snake River Basin exists along the main stem of the Snake River. Existing and potential uses include hydropower generation, irrigation, fish and wildlife, recreation, and protection of water quality. The amount of water required for the potential uses exceeds the remaining available supply.

The river flow is regulated by numerous dams, reservoirs, direct diversions, and return flows as it crosses the southern half of the state. Existing water rights are principally for irrigation and hydropower generation. Irrigation needs are normally met except during extreme low runoff years. Hydropower generation utilizes water remaining after irrigation diversions even through there are licensed water rights for hydro-generation at several points on the Snake River. Some of these rights are subordinated to upstream diversion and depletions and others are not. The largest unsubordinated right is at Swan Falls Dam (near the Murphy gage) with a flow right of 9450 cfs (includes 3300 cfs in claims). Substantial development has occurred above this point, thus reducing flows below the claimed right. Pending applications to divert water could reduce the flows to essentially zero during July, August and September of each year. The resulting impact would substantially reduce electrical energy generation at Swan Falls and at all other points downstream on the main stem Snake River. In the absence of protests from the public and water right holders, the Department of Water Resources has continued to issue permits to develop new water supplies for irrigation from Snake River.

Permits previously issued by the department, if fully developed, would reduce summertime flows in dry years to about 3300 cfs near Murphy. Sequences of consecutive years of flows of this magnitude would have occurred in the early 1930's and again in the late 1950's and early 1960's if present developments, plus the already issued permits, had been fully developed at that time. These flows were computed in a study of major outstanding permits from the Snake River in southwestern Idaho (Technical Studies Report No. 3) and a preliminary estimate of effects of full development of outstanding groundwater permits in the Upper Snake.

A flow of 3300 cfs at Swan Falls is about one-third of the flow necessary to meet the entitlement of hydro-generation of that power plant if the recorded water filings are valid. It is also less than the amount identifed as needed for fish, wildlife and recreation purposes at Swan Falls or downstream. The potential uses of water in the main stem Snake River have been identified in sufficient detail to determine that remaining water supplies cannot fulfill all identified needs.

The Idaho Water Resource Board concluded, after considering all current and potential uses of water on the main stem Snake River, that depletion of flows below that currently available in the low flow months to maintain water for production of hydropower and other main stem water uses is not in the public interest.

Therefore, main stem Snake River flows will be protected against further appropriations and preserved to provide the following average daily flows at the following U.S. Geological Survey stream gaging stations:

Gaging Station	**Protected Flow (Average Daily)**
Milner	0 cfs
Murphy	3,300 cfs
Weiser	4,750 cfs

Studies indicate that sufficient water exists in excess of these flows to provide for additional uses if water conserving and storage facilities are constructed.

Water available in excess of the designated flows for development above an average annual flow basis are:

Gaging Station	**Water Presently Available for Appropriation (Average Year)**
Milner	1,473,000 acre-feet
Murphy	4,218,700 acre-feet
Weiser	7,821,000 acre-feet

The above average daily flows will allow the flow requirements contained in the Federal Power Commission License issued for the Hells Canyon hydropower complex to be met without significantly affecting hydropower production. Article 43 of the license provides the management criteria,

"The project shall be operated in the interest of navigation to maintain 13,000 cfs flow into the Snake River at Lime Point (river mile 172) a minimum of 95 percent of the time, when determined by the Chief of Engineers to be necessary for navigation. Regulated flows of less than 13,000 cfs will be limited to the months of July, August, and September, during which time operation of the project would be in the best interest of power and navigation, as mutally agreed to by the License and the Corps of Engineers. The minimum flow during periods of low flow or normal minimum plant operations will be 5,000 cfs at Johnson's Bar, at which point the maximum variation in river stage will not exceed one foot per hour. These conditions will be subject to review from time to time as requested by either party."

The Board further finds that this requirement is still in the public interest and should be maintained without change.

Within the above management framework, each future use of water can be considered individually. Water allocations for forestry, flood damage reduction, environmental quality, urban lands, land measures, mining, and lake and reservoir management are included as components of other allocations.

Agriculture

Water is allocated for additional new and supplemental irrigation development. A minimum level of irrrigation development of 850,000 acres by the year 2020 over that which existed in August 1975 is endorsed. The location of future development is expected to be: Upper Snake — 498,000 acres; Southwest Idaho — 292,000 acres and Lower Snake — 60,000 acres. In addition, 255,000 acres are expected to receive supplemental irrigation water. At least 1.7 million acre-feet of water will be consumptively used to meet the minimum level of irrigation development. A maximum level of irrigation development is not identified but will be determined as water supplies, economic conditions, environmental standards and protected instream water rights allow. The Water Resource Project Feasibility Planning Program is directed to assist in appropriate studies to help accomplish the identified agricultural development.

Municipal and Industrial

Water is allocated for municipal and industrial purposes. It is projected that the basin population will more than double by year 2020 and additional industrialization will occur. Water necessary to process agricultural, forest, minerals, aquaculture and other products are included in this allocation. The plan provides for 830,000 acre- feet of diversion beyond August 1975 levels to meet this growth. The diversion is distributed as follows: Upper Snake — 420,000 acre-feet; Southwest Idaho — 275,000 acre-feet; and Lower Snake — 135,000 acre-feet. The net depletion will be about 105,000 acre-feet.

Electric Energy

Water is allocated for electric energy. Future electric energy requirements will be largely supplied from thermal plants. The plan provides for 170,000 acre-feet beyond August 1975 levels for consumptive use in cooling thermal power plants. The depletion is distributed as follows: Upper Snake — 75,000 acre-feet; Southwest Idaho — 30,000 acre-feet. In addition, flows in the Snake River will be stabilized for the hydropower generating capability of the river.

Navigation

No specific allocation of water is made for commercial or recreational navigation. Commercial navigation enroute to Lewiston on the Columbia River and Lower Snake River can be accommodated with the flows leaving Idaho in Snake River at Lewiston. Above Lewiston, commercial and recreational navigation should be accommodated within the protected flows on Snake River and the instream flows on tributary streams, however, both commercial and recreational navigation are included as components of the multi-lake and reservoir management program.

Aquaculture

No specific allocation of water is made for acquaculture uses. Water necessary to process aquaculture products is included as a component of the municipal and industrial water allocation. Aquaculture is encouraged to continue to expand when and where water supplies are available and where such uses do not conflict with other public benefits. Future management and development of the Snake Plain aquifer may reduce the present flow of springs tributary to the Snake River. If that situation occurs, adequate water for aquaculture will be protected, however, aquaculture interests may need to construct different water diversion facilities than presently exist.

Recreation

No specific allocation of water is made for recreation. The instream flow program for fish and wildlife will provide water for recreation on tributary streams. Main stem Snake River recreation may be affected because of lower flows than presently exist particularly during summer months. Some existing reservoirs may experience greater seasonal fluctuations from increased use of stored water. The State Natural and Recreational River System and Greenway-Greenbelt System will aid and promote water-oriented recreation in the basin. Recreation is also a component of the multi-use lake and reservoir management program.

Indian Resource Use

No separate allocation of water is made for Indian resource use on the Indian reservations. Indian water needs are included as components of other water uses. Irrigation, municipal, industrial, electric energy, and the instream flow program include water for Indian uses. Identification of specific needs is required before water allocations can be made specifically to Indian water uses. Several policies in the plan are designed to assist the Indian tribes in obtaining necessary information and incorporating their needs into the State Water Plan.

Fish and Wildlife

No specific allocation of water on the main stem Snake River is made for fish and wildlife, however, the plan does provide for maintaining flows on selected tributary streams to the Snake River for fish and wildlife. Additional detailed study should be conducted on the prinicipal streams before setting stream resource maintenance flows for fish and wildlife. Information provided by the Idaho Fish and Game Department in the report. "Stream Resource Maintenance Flow Studies," 1975 and 1976 will serve as a guide until detailed studies are complete. Completion of a State Fish and Game Plan will improve management decisions where fish and wildlife are involved. Flows in the Snake River will be less than identified as needed for fish and wildlife in some months of the year. However, significant habitat will be protected for fish and wildlife as a result of protected flows at Murphy and Weiser in the Snake River to meet other uses.

Water Quality and Pollution Control

No specific allocation of water is made for water quality and pollution control. As of this date no assessment has been completed which calls for or identifies flows necessary to maintain water quality. Other policies of the plan are based upon the assumption that the water quality goals established by the Congress in P.L. 92-500, The Federal Water Pollution Control Act Amendments of 1972, will be met in Idaho. The instream flow program is directed towards meeting fish, wildlife, and recreation needs, not to dilution of pollution.

Interstate Considerations

The Snake River Compact, enacted in 1949, establishes the allocation of water between Idaho and Wyoming. No other compacts exist with regard to the allocation of the Snake River flows. The State of Washington has previously expressed its desire to see a minimum flow of 22,000 cfs at the Idaho-Washington boundary on the Snake River. The plan does not provide any minimum flow at that point except that which would result under the provisions of the Federal Power Commission License for Hells Canyon Dam of 5000 cfs at Johnson's Bar. Flows at the Idaho-Washington border will be less than 22,000 cfs at times.

Administration of State Water Plan

The major policy action of the State Water Plan is the allocation of the available and unappropriated waters of the state to meet a selected level of future water use. The State Water Plan is the legal and administrative vehicle for reserving the future use of these waters to a selected level for each water use function. The allocation procedure is particularly critical in the Snake River Basin where studies have shown that future water uses will exceed supplies.

Periodic reviews at five-year intervals of the amount of water allocated to the various water use functions are to be part of the continuing planning process for updating the State Water Plan to meet current and projected needs. This periodic review will enable any apparent irregularities or discrepancies in the water allocated to any particular use to be identified and needed modifications made to the State Water Plan.

The allocation process as established by the State Water Plan, therefore, is specific for each water use function and will be administratively monitored and enforced. The allocation process is not specific as to where the water uses are to occur other than within the planning region. In this way, flexibility is maintained for the public to develop, use, and manage the state's available water resources to meet desirable goals and means.

The impact of future development cannot be fully described at this time. The large number and scattered location of existing permits will have a profound impact and could cause beneficial or adverse effects depending on the nature of development. Because the extent to which these permits may ultimately be developed is not known, impacts as a result of the State Water Plan will vary from area to area. The plan is based on development of water authorized by existing permits as the first stage of the allocations. The second stage of development will be based on approval of new permits when and where all economic, environmental, and social criteria can be met. The plan does not determine where specific agricultural development must occur nor set instream flows for fish and wildlife, but it does preserve options and provide opportunities throughout the basin. In adopting this State Water Plan there are several actions that should be taken to protect the public interest in water resources. The Department of Water Resources will include in their basic program of water inventories and data collection the following:

1. Expand the data collection program and evaluation studies on water levels and outflow from the Snake Plain aquifer.

2. Maintain and expand the state collection program and evaluation studies of streamflows where needed.

3. Monitor water use efficiency of existing and new water uses throughout the basin.

4. Complete a thorough analysis of existing permits and their impact on the aquifer and streams of the basin.

5. Report to the Idaho Water Resource Board annually (October 1 to September 30) the:
   a) status of current water permits;
   b) number of new permits issued, location, quantity of water permitted, and impact of diversion and depletion.

In addition to these items, it may also be in the public interest to preserve or cancel permits previously granted for large scale public development. These permits should be reevaluated now and in five years when the State Water Plan is updated.

POLICY 33 Panhandle Basins

The available and unappropriated waters of the Spokane, Pend Oreille-Clark Fork, and Kootenai river basins are allocated to satisfy existing and potential needs for economic development and environmental quality. This allocation recognizes and protects all existing and potential water uses and private and public rights.

Water Allocation Criteria

No special criteria are established for allocation and management of the water resources in the Panhandle Basins. Within this policy, each use of water can be considered individually. Water allocation for foresty, damage reduction, environmental quality, urban lands, land measures, mining, and lake and reservoir management are included as components of other allocations.

Agriculture

Water is allocated for additional irrigation development as follows: Spokane Basin — 78,000 acre-feet for 26,000 new acres of development; Pend Oreille-Clark Fork Basin — 30,000 acre-feet for 10,000 new acres of development; and Kootenai Basin — 102,000 acre-feet for 34,000 new acres of development and 1,000 supplemental acres. The combined net depletion is 140,000 acre-feet.

Municipal and Industrial

Water is allocated for municipal and industrial purposes. It is projected that the Panhandle population will more than double by year 2020 and that additional industrialization and suburbanization will occur. The plan provides for an additional 80,000 acre-feet of diversion and 10,000 acre-feet of depletion for municipal and industrial uses.

Electric Energy

Water is allocated for electric energy. Future electrical energy requirements will be largely supplied from thermal plants. The plan provides for 18,000 acre-feet of depletion from the Pend Oreille-Clark Fork River system in the Panhandle Basins for evaporative cooling of thermal power plants.

Navigation

No specific allocation of water is made for navigation, however, both commercial and recreational navigation are included as components of the multi-use land and reservoir management program. The instream flow program for fish and wildlife will provide water for recreational navigation.

Recreation

No specific allocation of water is made for recreation. The instream flow program for fish and wildlife will provide water for recreation in Panhandle streams. The State Natural and Recreational River System and Greenway-Greenbelt System will aid and promote water-oriented recreation in the Panhandle. Recreation is also a component of the multi-use lake and reservoir management program.

Indian Resource Use

No specific allocation of water is made for Indian resource use or the Indian reservation. Indian water needs are incorporated as components of other water uses. Irrigation, municipal, electric energy, and the instream flow program include water for Indian uses. Identification of specific needs is required before improved estimates of water allocations can be made. Several policies in the plan are designed to assist the Indian tribes in obtaining necessary information and incorporating their needs into the State Water Plan.

Fish and Wildlife

No specific allocation of water is made for fish and wildlife, however, the plan does include maintaining flows on all streams for fish and wildlife. Additional detailed study should be conducted on the principal streams before setting stream

resource maintenance flows for fish and wildlife. Information provided by the Idaho Fish and Game Department in the reports, "Stream Resource Maintenance Flow Studies," 1975 and 1976 shall serve as a guide until the appropriate studies are complete. Completion of a State Fish and Game Plan will improve management decisions where fish and wildlife are involved.

Water Quality and Pollution Control

No specific allocation of water is made for water quality and pollution control. As of this date no assessment has been completed which calls for or identifies flows necessary to maintain water quality. Other policies of the plan are based upon the assumption that the water quality goals established by the National Congress in P.L. 92-500, The Federal Water Pollution Control Act Amendments of 1972, will be met in Idaho. The instream flow program is based on fish, wildlife, and recreation needs, not on dilution of pollution. However, the program will provide quality waters throughout the basin.

POLICY 34
Bear River Basin

The Idaho Water Resource Board supports interstate negotiations efforts to reach basinwide agreement for uniform allocation and development of the Bear River Basin resources.

The Bear River Compact which has been in effect since 1958 did not allocate developable waters below Bear Lake. Utah's potential for establishing first priority on all remaining waters in the Bear River have caused considerable concern among Idaho citizens that no water will be available to meet Idaho's future needs.

As of 1976, 18 years have elapsed since the Compact was ratified. The Bear River Compact specifies that "at intervals not to exceed twenty years, the Commission shall review the provisions of the Compact and after notice and public hearings, may propose amendments to the provisions." Compact review has been initiated by the states of Idaho, Utah and Wyoming. For purposes of guiding the review process, the Idaho Water Resources Board declared as policy that the Idaho negotiation team seek to obtain as much of the unconsumed flow entering the Great Salt Lake as possible for Idaho while negotiating in good faith with other states. Any recommendations reached by the negotiations team will be reviewed by the citizens of the Bear River Basin and must be formally approved by the legislature, the Governor, and the Congress of the United States before they become law.

In considering possible revisions that would benefit Idaho citizens, Idaho's position is that all present water uses for irrigation be protected and water rights for power generation during spring and winter would either be subordinated or compensated.

Any new water available through the negotiation process as Idaho's entitlement will consider first satisfying areas needing supplemental water where financially feasible and then new lands.

Determination of available water for new uses of the Bear River has to be made so that allocations for future growth and environmental quality protection can be implemented.

The water allocations should be made basinwide so that all interest will be able to receive equal consideration. The allocations for Idaho will be studied and proposed after the negotiations between the states are completed.

Basin Management Policies - Panhandle Basins

POLICY 35
State Natural River Designation

The following rivers should be in the State Natural and Recreational River System initially, based upon information available from Federal Wild and Scenic Rivers studies:

1. **St. Joe - in its entirety;**
2. **Priest - the upper river from the Canadian border down to the large Priest Lake;**
3. **Moyie - in its entirety.**

The St. Joe, Priest and Moyie rivers are under study by the U.S. Forest Service for inclusion in the National Wild and Scenic River System. Available data indicates that these rivers have unique characteristics and values which merit their consideration for preservation in a free-flowing condition. Based on ongoing studies, these rivers should become the initial components of the recommended State Natural and Recreational River System.

POLICY 36
St. Joe River

The St. Joe River from St. Joe Lake to Beedle Point should be included in the National Wild and Scenic Rivers System upon failure of the state to adequately protect the river's free-flowing values by July 1, 1978.

The St. Joe River in the Spokane Basin reflects the scenic beauty, historical variety, and fish and wildlife quality that forms a large portion of the heritage of Idaho. It is a major waterway within Idaho and the nation, and is worthy of an individual and specific management plan.

The St. Joe River in its entirety should be placed in a State Natural and Recreational River System for management and enhancement of its free-flowing values. However, upon failure of the state to offer adequate protection, or the inability of the state to successfully develop, fund, and operate such a system, the river should be included in the National Wild and Scenic River System.

The entire 132.1 miles of the St. Joe River qualifies for inclusion in the National Wild and Scenic River System. The river is outstandingly remarkable and its free-flowing condition, water quality, scenery and other associated qualities are worthy of protection. National legislation should be enacted that would add the upper 72.8 miles of the St. Joe River from St. Joe Lake downstream to the St. Joe National Forest Boundary to the National Wild and Scenic River System, to be administered by the Secretary of the U.S. Department of Agriculture.

The lower 59.3 miles between the St. Joe National Forest boundary and Beedle Point should become part of the National System and administered under a specific plan developed by the state and local governments. The Wild and Scenic Rivers Act recognizes varying river character and levels of development. Based on these differences, this recommendation proposes that the segments of the St. Joe River within the National Forest be classified as follows:

WILD

St. Joe to Spruce Tree Campground	26.6 miles

RECREATIONAL

Spruce Tree Campground to National Forest Boundary	46.2 miles

The segments outside the National Forest Boundary should be classified as follows:

SCENIC

Falls Creek to Bells Lake	15.1 miles
Mission Point to Beedle Point	6.4 miles
	21.5 miles

RECREATIONAL

National Forest Boundary to Falls Creek	25.5 miles
Bells Lake to Mission Point	12.3 miles
	37.8 miles

Funding for development of the Management plan for the lower 59.3 miles of river should be provided by the Water Management Fund as outlined in Policy 31.

POLICY 37 South Fork Coeur d'Alene River Rehabilitation

The State of Idaho should sponsor a joint federal-state-private stream channel stabilization and revegetation project(s) in the South Fork Coeur d'Alene River drainage. Funds should be provided from the Rehabilitation Fund discussed in Policy 31 for this project(s).

The South Fork Coeur d'Alene River drainage has produced a tremendous volume of minerals and contributed greatly to the development of the state and to the Emerald Empire-Panhandle area. However, this has caused significant environmental degradation. The South Fork, due to its location and the severity of environmental problems, should receive immediate attention. Monies should be

appropriated from the Rehabilitation Fund as outlined in Policy 31 to insure state participation and be in the amount of $200,000.000 per year for a period of ten years, This revenue should be used as matching funds for federal, local, and private efforts.

POLICY 38
State Sovereignty in Water Resources

Idaho is committed to state sovereignty over decisions affecting the development, use, and management of water resources within its boundaries and opposes any attempt by the federal government, its management agencies, or any other state to usurp the state's role in these areas. Idaho will cooperate with neighboring states and the federal government to ensure that the resource management interests of the people of Idaho are protected and enhanced.

The federal government is attempting to control, by permit and regulation, many water programs and activities which have traditionally been state responsibilities. This is a result of federal agency action in response to legislation enacted by Congress such as the National Dam Safety Act, amendments to the Water Pollution Control Act, and the Endangered Species Act. Of greater concern are attempts by federal officials to expand federal control through administrative processes such as Executive Orders, court decrees, and new interpretations of existing laws.

The Idaho Water Resource Board is responsible for the formulation and implementation of state water policy through the State Water Plan. The state's position on existing and proposed federal policies and activities should be coordinated by the Water Resource Board to ensure that a single and consistent state view is expressed. This should not be construed to mean that all state agency actions involving the federal government must be processed by the Water Resource Board. Agencies should continue to direct those programs to which they have been assigned primary responsibility. All state programs should be managed to be consistent with state water policies.

The objective of this policy is to preserve and protect state sovereignty over the conservation, development, and management of Idaho's water resources. That is, all water management prerogatives exercised within Idaho should be accomplished under state authorization. This policy should not be interpreted as an attempt to admit or deny Indian and federal water rights.

POLICY 39
Anadromous Fishery

It is the policy of Idaho to preserve and enhance the state's anadromous fishery resource. It is in the public interest to maintain free-flowing stream habitat and instream flows to achieve this policy. Idaho will promote state participation in coordinated regional management of the Columbia River anadromous fishery.

Idaho's once numerous anadromous fisheries have been severely depleted because of heavy downstream fishing pressure, actions by the federal government, and the single purpose demands of downstream state hydropower and navigation. Strategies to restore Idaho salmon and steelhead runs to productive levels are needed along with a commitment to multiple use of the state's water resources. A call for the federal government and downstream interests to take timely action to help restore Idaho's anadromous fishery resources is past due. These resources are at historic low levels; some races are near extinction. Idaho's anadromous fishery problem involves the entire Columbia River basin and cannot be solved by Idaho alone simply as a state issue.

The Columbia River basin still produces the world's largest runs of chinook salmon and steelhead trout, major runs of coho and sockeye salmon, and smaller numbers of chum and pink salmon. Collectively, these runs comprise an unparalleled national resource of international renown. Idaho's Salmon and Clearwater drainages provide a major portion of these Columbia Basin runs.

Anadromous salmon and steelhead supported the Indian culture over vast reaches of the Columbia Basin for thousands of years. Beginning in the mid-1800's, these resources were the foundation of a productive non-Indian commercial fishing economy and lifestyle which were concentrated in the central and lower reaches of the main-stem Columbia River. By the late 1950's, ocean sport and commercial fisheries were harvesting large numbers of salmon produced throughout the Columbia River's tributaries. By the late 1970's, what were once the largest and most valuable components of the Idaho salmon and steelhead runs had been progressively reduced to a small fraction of their former abundance.

The regional, social, economic, legal and political trauma resulting from decades of increasing conflict among water resource users competing for dwindling supplies has frustrated attempts directed toward reversing this critical situation.

Most naturally produced salmon and steelhead populations have deteriorated. These losses have been particularly steep and have resulted in the elimination or near elimination of fisheries on all Idaho upriver streams. Currently, all salmon and steelhead runs originating above the confluence of the Columbia and Snake rivers are being reviewed for possible inclusion on the national list of threatened and endangered species.

The precarious condition of Idaho salmon and steelhead runs is the result of many interrelated factors. The major overriding factor is the loss of juvenile downstream migrants at main-stem Columbia and lower Snake River hydroelectric projects. Little or no replacement of salmon and steelhead lost because of elimination of natural habitat by water projects is another factor. Location of replacement facilities in areas other than where fish losses occurred has been a contributing factor. Still another factor is the degradation of spawning and rearing habitat by irrigation water diversions, by sedimentation from logging and mining operations, by overgrazing of riparian areas, and by downstream commercial, recreational, and Indian fish harvests.

There is no simple solution to Idaho's salmon and steelhead problem, a problem decades in the making. Long-term plans addressing this issue require the full support of the competing users of water resources within Idaho and of various water and fishery resource users in down-stream states. Restoring Idaho's depressed salmon and steelhead runs will require unprecedented public support.

This policy explicitly states that it is in the public interest to preserve and enhance the state's anadromous fishery resource. Programs to implement this policy will operate within all legal or institutional constraints imposed by state and federal law. This policy is compatible with other state water policies (particularly No. 20 — Land Development and No. 32 — Snake River Basin Water Allocations): it must be viewed as a part of the total State Water Plan in which all policies are of equal stature. This policy does not injure existing water rights.

It is the policy of the State that the Snake River from Bliss Dam to C.J. Strike Reservoir and from Swan Falls Dam to lower Granite Reservoir and the Kootenai River be preserved in a free flowing condition to protect the remaining White Sturgeon habitat.

POLICY 40
White Sturgeon

White Sturgeon are the largest freshwater fish in North America. In Idaho, White Sturgeon are found in the free flowing portions of the Snake River upstream to Shoshone Falls, the extreme lower portion of the Salmon River and in the Kootenai River. Dam construction has had the immediate effect of blocking sturgeon spawning migration, isolating some populations, and impounding river segments, creating a loss of spawning and rearing habitat. The consequences of these dams has greatly diminished sturgeon population in Idaho.

The 1976 State Water Plan assumed that hydropower development on the state's major river systems would not be a factor in future water resource allocation decisions. However, recent applications for study permits from the Federal Energy Regulatory Commission have shown that this assumption was false. Construction of small hydro projects on key reaches of the Snake and Kootenai rivers for what could be termed short-term measures in planning for Idaho's future energy demands is of great concern because such projects bar alternative water uses. Electricity produced by these projects can only delay for a relatively short time the point when other measures must be undertaken to supply long-term power generating needs. Short-term energy benefits gained on key reaches of the Snake and Kootenai rivers at the expense of irreplaceable sturgeon losses are not an approach that is in the public interest of the people of Idaho. Results of sturgeon studies conducted by the Idaho Fish and Game Department show a thriving, actively reproducing sturgeon population in the Snake River above C. J. Strike Reservoir and below Swan Falls. These studies have determined that the entire viable sturgeon population in the Snake River above C. J. Strike Reservoir is concentrated between C. J. Strike Reservoir and Bliss Dam. The Kootenai River in Idaho also produces a relatively thriving sturgeon population. Idaho Department of Fish and Game study results also indicate these populations would be reduced or eliminated by impoundment for hydropower.

White sturgeon require free-flowing water. Avoiding further habitat losses from dam construction and water diversion for areas now supporting viable sturgeon populations is mandatory if Idaho's remaining sturgeon populations are to survive.

It is the policy of Idaho that a State siting process be established for hydropower development to ensure that the public interest is recognized.

POLICY 41
Hydropower Siting

There are increasing demands by federal, state, and local governments and by private investors for the construction of new and expanded hydropower plants. Rapidly increasing costs of nonrenewable energy sources such as coal, together with the enactment of the Public Utility Regulatory Policies Act of 1978, have induced considerable interest in small scale hydroelectric generation.

The Idaho Public Utilities Commission has jurisdiction to regulate every public utility in the state. This authority, however, does not extend to the regulation of hydroelectric facilities constructed by non-utilities. (The Public Utilities Commission regulation of hydroelectric facilities extends to those rates and services of the state's public utilities and not to the construction of small hydro plants by non-utilties whose intentions are to sell the ouptut to a utility.)

A Federal Energy Regulatory Commission license must be obtained prior to the construction of nearly every proposed hydropower project. A detailed explanation of all aspects of the proposed project must accompany applications for this license except for proposed projects which are less than 1.5 MW in size, for which a shorter, less detailed application may be submitted. The Federal Energy Regulatory Commission must review all applications received. This review must include an analysis of environmental impacts, engineering feasibility, and economic feasibility. Opportunity is given for the public or other agencies to comment, protest, intervene, or submit competing applications. This process seeks to ensure that infeasible projects or projects with severe negative environmental impacts will not be undertaken. However, this process does not include an analysis of the optimum use of the water resources. No such analysis is currently carried out by any agency.

The role of state government in analyzing proposed hydropower projects for optimum resource use should be clearly identified for the benefit of developers, reviewing agencies, and the general public. Under the state constitution, the Idaho Water Resource Board is the agency in the state which is responsible for the optimum development of water resources in the public interest. In addition, it is the statutory duty of the Board to progressively formulate a unified, coordinated program for conservation, development, and use of all unappropriated water resources of the state. In adopting such a program, the Board shall integrate and coordinate use of water to achieve optimum development of water in the interest of and for the benefit of the state as a whole.

POLICY 42
Federal Energy Regulatory Commission Licensing

It is the policy of Idaho that for projects wholly within the state, or unless there is a Congressionally authorized project with overriding national interest the Federal Energy Regulatory Commission should defer to state water management authority all water resource aspects of hydroelectric project licensing.

Currently, the Federal Energy Regulatory Commission licenses all hydroelectric projects in the nation. Many of these projects are wholly within the states and have no controversial or objectionable aspects. A more efficient and effective licensing process could be developed if the Federal Energy Regulatory Commission would transfer the administrative process of licensing projects wholly within a state to the states.

Idaho's various departments are experienced in conducting analysis and review of projects. The Idaho Department of Water Resources currently receives all applications for utilizing the state's water for any activity. At the time an application for water for a hydroelectric project is submitted, additional information could be provided to secure a hydropower license, the same information now submitted to the Federal Regulatory Commission. The basic elements of the license should stay the same in terms of study detail, timing, and limitations. Projects that are clearly interstate in nature should remain under the regulatory authority of the Federal Energy Regulatory Commission. The objective of this policy is to provide maximum state control over water resources and to allow greater efficiencies in water resource allocation decisions and not to duplicate the Federal Energy Regulatory Commission's authorities and responsibilities.

POLICY 43
Joint State-Federal Hydropower Development

It is the policy of Idaho that the State should enter into cooperative programs with the Bureau of Reclamation and the Army Corps of Engineers to provide for the optimum development of hydroelectric generation potential at the existing Federal dams and reservoirs within the State.

The Bureau of Reclamation and the Army Corps of Engineers have constructed several dams and reservoirs in Idaho. Some of these projects include electrical generation as a basic use of water. However, some do not have electrical generation facilities.

Previous studies on development of electrical generation have been done by various state and federal agencies. However, a cooperative program leading to implementation has not been considered. Idaho should investigate the potential of cooperatively developing the hydroelectric potential at federal facilities, thereby making additional energy resources available to the citizens of Idaho.

The federal government is agreeable to the addition of hydropower at existing facilities by nonfederal entities provided that this development is found to be compatible with the purposes for which Congress authorized the project, and that federal hydroelectric facilities have not been authorized by Congress for construction.

The state and the federal government should sign an agreement ensuring that nonfederal applications for development to hydro potential on the canals, dams, and other features of federal water projects will receive timely and proper consideration.

Disagreements over federal authority and policy have burdened private and other nonfederal interests who want to develop hydroelectric plants on existing federal works. A cooperative agreement will help resolve conflicts which otherwise might take new legislation or result in litigation.

The agreement should provide for a continuing review of the methods by which a reasonable annual charge may be assessed for falling water provided by federal projects. It should also provide that nonfederal developers be required to clear their plans with federal agencies to ensure that no conflict with existing project purposes will arise.